NEW EQUIPMENT DIGEST

A Penton Publication

June, 1958

Volume 23—Number 6

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CHECK AND PASS ALONG

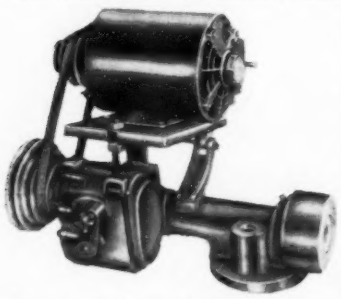
✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 104

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

MILLING ATTACHMENT
performs various types of work

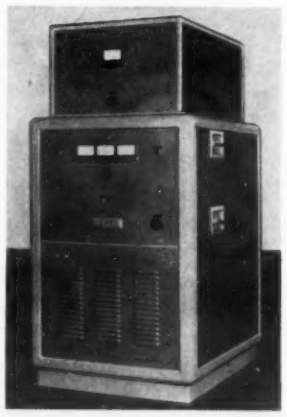
Lathes, milling machines, turret lathes, planers, boring mills, and special machines can be equipped with the Model M milling attachment. Keyseating, milling, slotting, drilling, shaping, boring, splining, squaring, hexing, and other operations can be performed on small or large parts. Its spindle is mounted on Timken tapered roller bearings and has a No. 3 Morse taper. Six speeds from 200 to 900 rpm are offered. Spindle height is 2 in. and capacity is a 1-in. end mill. Price of $245 includes ½-hp motor, pulleys, V-belt, and draw bar. Made by **Alva Allen Industries**, Dept NED, 1001-1015 N. Third St., Clinton, Mo.



▲ For more details circle **NED-1 F8** on enclosed inquiry slip ▲

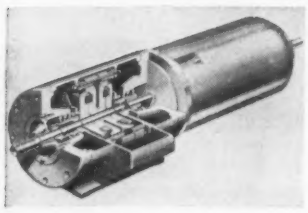
INDUCTION HEATING GENERATOR
dual frequency type rated 10 kw

This 10-kw output dual frequency generator has a low frequency range of 250 to 500 kc and a high range of 2 to 5 megacycles. Unit provides flexibility in heating operations where frequency may be important without changing the basic features of the standard generator. Higher frequency range is practical for heating very thin parts, semiconductor materials, and for superficial heating. Circuits for both ranges use the same oscillator tube and direct-current supply. Each has a separate grid control. Made by **Lepel High Frequency Laboratories, Inc.**, 54-18 37th Ave., Woodside 77, N. Y.



▲ For more details circle **NED-2 F8** on enclosed inquiry slip ▲

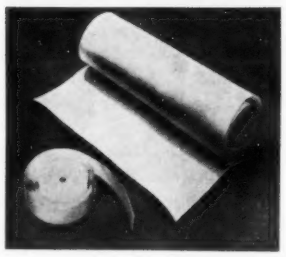
VARIABLE SPEED DRIVE
uses constant speed source



Power from a constant speed source can be delivered, without any mechanical connection and at any preselected or variable speed, by the Marvex drive. Device uses eddy currents to set up magnetic fields to eliminate all mechanical connections. The more current, the stronger the field, and the more power is transmitted. Six sizes for use with motors up to 150 hp at 1750 rpm are offered. Drive is either bolted to D-flange motors or driven from other motor types through couplings. Application is to blowers, fans, pumps, compressors, industrial machinery, winches and hoists, conveyors, and other variable speed equipment. Made by **Michigan Tool Co.**, Cone-Drive Gears Div., 7204 E. McNichols Rd., Detroit 12, Mich.

▲ For more details circle **NED-3 F8** on enclosed inquiry slip ▲

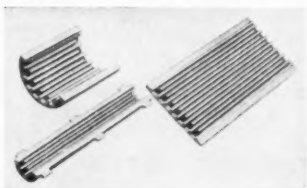
TEFLON TAPE
made in widths to 24 in.



Thicknesses from 0.005 to 0.096 in. are available in Teflon tape. Widths range up to 24 in. Tape is widely used in applications where products being handled must not adhere to equipment. The tape is also available in a cementable type. Made by **United States Gasket Co.**, 654 N. Tenth St., Camden 1, N. J.

▲ For more details circle **NED-4 F8** on enclosed inquiry slip ▲

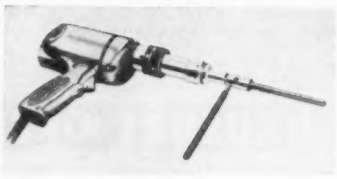
ELECTRIC HEATING UNITS
in flat and semicylindrical shapes



Line of flat and semicylindrical electric heating units includes many sizes in temperature ranges to 1800 and 2200° F maximum. Flat units can be grouped together to form an enclosed chamber. Refractories are shaped so that coils can be exposed or muffled, depending on material being heated. Semicylindrical units are used to heat straight lengths of pipe or tubing, and can be arranged to surround a pipe, or to apply heat under a curved surface. Made by **Hevi Duty Electric Co.**, Box 563, Milwaukee 1, Wis.

▲ For more details circle **NED-5 F8** on enclosed inquiry slip ▲

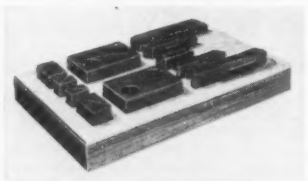
ELECTRIC HAMMER
impact-drills up to ½-in. holes



Blows of this Model H-812A electric hammer are adjustable with a twist of the knurled collar to suit any job. The portable lightweight tool will impact-drill up to ½-in. holes in concrete, 1 in. deep in 30 seconds. It can also be used for tuck-pointing, chiseling, channeling, and many other building maintenance jobs. Net price of $98.50 includes six assorted Rawl drills, two drill chucks, an all-purpose chisel, and steel carrying case. Made by **Milwaukee Electric Tool Corp.**, 5328 W. State St., Milwaukee 8, Wis.

▲ For more details circle **NED-6 F8** on enclosed inquiry slip ▲

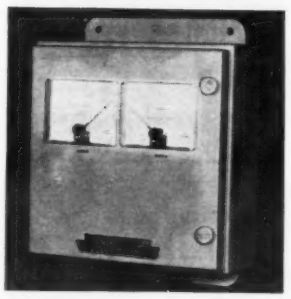
STEP BLOCK & CLAMP SETS
with clamps for ⅜ to 1-in. bolts



Added to line of hold down and clamping tools are these step block and clamp sets. Photo shows clamps for ½-in. bolts with standard 1-in. wide blocks. Also available with standard blocks are clamps for ⅜ and ⅝-in. bolts. Clamps for ½ and ⅝-in. bolts, along with clamps for ¾-in. bolts, are offered in a heavy-duty set with blocks 1½ in. wide. A double-duty set provides clamps for 1-in. bolts with blocks 2 in. wide. Made by **Northwestern Tools, Inc.**, 127 Hollier Ave., Dayton 3, Ohio.

▲ For more details circle **NED-7 F8** on enclosed inquiry slip ▲

MACHINE LOAD CONTROL
automatically protects machinery



Automatic shut-off, automatic warning, and/or continuous on-off automatic operation are means of protection provided for machinery and equipment by this machine load control. Complete unit protects against overload, underload, no-load, and phase failure (single phasing). Two separate contact ammeters, each with an indicating pointer, monitor and continuously display the load on the drive motor. Each ammeter has an adjustable limit pointer which, when contacted by an indicating pointer, actuates the warning and shut-off mechanisms. Simpler control forms with one ammeter warn or shut off for both overload and underload-no-load situations, or for underload-no-load protection. Made by **Tipptronic, Inc.**, Dept. PP, Chagrin Falls, Ohio.

▲ For more details circle **NED-8 F8** on enclosed inquiry slip ▲

ENGRAVING CUTTERS
steel and tungsten carbide types

Improved line of engraving cutters includes four standard high speed steel types without flange and wrench flats. Blanks are heat treated to 64-66 Rockwell C, then ground. Types with flats are ground within 0.001 in. above center, and tapers are accurate to 0.0002 in. Tungsten carbide-tipped cutters are available in three sizes with brazed tips up to ⅜ in. wide and two styles with adjustable tungsten carbide blades for ¾ and ½-in. cuts. Tapered or straight shanks are hardened and ground tool steel. Line includes straight shank, single lip high speed steel cutters up to 5/16 in. diameter and solid tungsten carbide cutters up to ¼ in. diameter. Made by **H. P. Preis Engraving Machine Co.**, 252 Industrial Branch, U. S. Highway 22, Hillside, N. J.

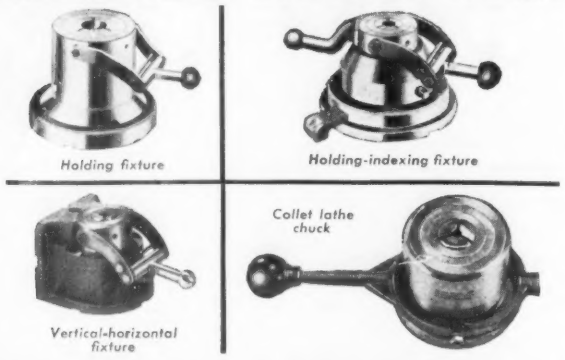
▲ For more details circle **NED-9 F8** on enclosed inquiry slip ▲

QUICK-RESET COUNTER
predetermining wheels are optional

Offered with or without predetermining wheels, the Series 1522 counter is reset to zero by depressing the reset lever through a 60-degree arc. Predetermining wheels can be preset to any number within the 100,000-unit capacity, and at that number the counter automatically stops. The counter will subtract in the opposite direction. Drive shaft speed up to 6000 rpm and 8000 counts per minute are the maximums recommended. The knock-off switch connected to the counter has a maximum rating of 10 amp at 125 or 250 v ac; ½ amp at 125 v dc; or ¼ amp at 250 v dc. Without the predetermining feature, the Series 1522A counter can be used for all adding or subtracting counting jobs. It can be reset while running. Made by **Veeder-Root Inc.**, 19-P Sargeant St., Hartford 2, Conn.

▲ For more details circle **NED-10 F8** on enclosed inquiry slip ▲

GET A HOLD ON YOUR WORK



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For more details circle **NED-11 F8** on enclosed inquiry slip

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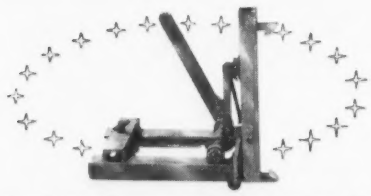
YOUNGSTOWN 1, OHIO RIverside 3-2125

For more details circle **NED-12 F8** on enclosed inquiry slip



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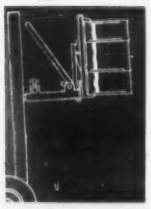
DUMPS DRUMS

Control or No Control

Mechanically controlled by operator, this Dump Automaton will handle drums, containers, fibers up to 2,000 pounds and tilt to any angle . . . FAST. Easily and quickly attached to any fork truck . . . requires no truck alterations. Terrifically rugged in construction to last and last.



In fast, clean, trouble-free, economical operation this Drum-dumping Robot will soon pay for itself. Your truck operators will cheer for it.

Write for complete data and prices

KUGHLER DEVELOPMENT CORPORATION

115-117 EAST 129TH STREET, NEW YORK 35, N. Y.

For more details circle **NED-13 F8** on enclosed inquiry slip

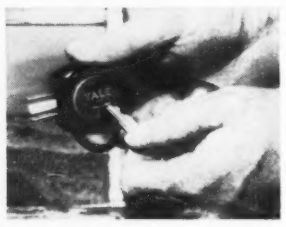
Up-Dating Means Prosperity

"The Man Who Needs a New Machine Tool Is Already Paying for It" is the slogan that has long been promoted by Jones & Lamson Machine Co. This same slogan can well be applied to all types of obsolete production equipment or maintenance procedures. We have seen evidence that today's business conditions have made company executives more than ever conscious of malpractice, wasteful methods, and inefficient machines.

The continued record-breaking level of reader inquiry returns on products advertised or described in NEW EQUIPMENT DIGEST indicates that men in industry are following the precepts set forth in the J&L slogan. Readers are seeking, more avidly than ever, materials, equipment, and processes to slash costs in their operations. Cost-cutting techniques and efficient machines installed today will make tomorrow's prosperity a certainty.

A. N. Gregg
EDITOR

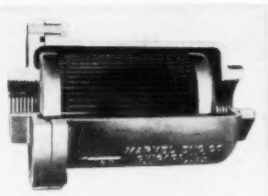
KEY-OPERATED ELECTRIC PLUG prevents unauthorized use



Usable in plants where potentially dangerous electrical equipment may be accessible to unskilled personnel who are not authorized to use it, this Yale Lock-it electric plug is key operated. In locked position, a nylon safety bar projects between the plug terminals so that it cannot be inserted in a socket. The safety bar retracts with a turn of the key. UL-approved, the plug retails for $1.75. Made by **Yale & Towne Mfg. Co.**, Room 1048, Chrysler Bldg., New York 17, N. Y.

For more details circle **NED-14 F8** on enclosed inquiry slip

IN-LINE FILTER handles 25 gpm of hydraulic oil



From 10 to 25 gpm of hydraulic oil can be handled at very low pressure drop by this in-line filter. Unit is 6 1/8 in. long, with 4 1/4-in. head diameter and 3 1/8 in. case diameter. Openings at both ends are 1-in. NPT. Monel wire cloth filtering media is available in mesh sizes from 30 to 100. Cartridge is easily removed for cleaning. Made by **Marvel Engineering Co.**, Dept. NED, 7227 N. Hamlin Ave., Chicago 45, Ill.

For more details circle **NED-15 F8** on enclosed inquiry slip

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American Made . . . Over 50% Saving

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Up to 3" Working Distance—Wide 3 Dimensional Field—Used in production, in research, or at home; for inspections, examinations, counting, checking, assembling, dissecting, speeding up and improving quality control. 2 sets of objectives on rotating turret. Standard pair of wide field 10X Kellner Eyepieces give you 25 power and 40 power clear, sharp, erect image. Helical rack and pinion focusing. Interpupillary distance adjustable. WE WILL SHIP ON 10-DAY FREE TRIAL. Stock No. 85,056-AE—full price, $99.50 f.o.b. Barrington, N.J. Low Power Supplementary Lens Attachment for above Stereo—provides 15X down to 6X with clear, extra large 1 1/2" field at 6X. Stock #30,276-AE $7.50
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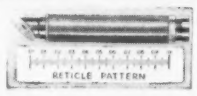
Fountain pen size, makes direct reading measurements; for checking small parts and dimensions under powerful magnification. Precision, glass etched reticle calibrated for measurements up to 1/10" by .001" divisions.



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For more details circle **NED-16 F8** on enclosed inquiry slip

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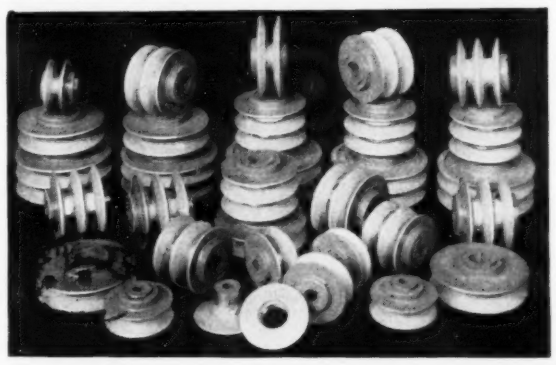

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For more details circle **NED-18 F8** on enclosed inquiry slip

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For more details circle **NED-19 F8** on enclosed inquiry slip

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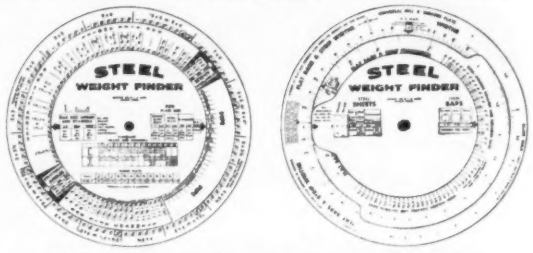
STEEL WEIGHT FINDER



Gives weights and dimensions of steel angles, beams, channels, flats, rounds, squares, hexagons, plates, sheet and strip, and pipe. Features an accurate slide rule for multiplying and dividing.

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ACCURATE . . . No complicated scales to read. Answers precisely as shown in standard weight tables.

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For more details circle NED-20 F8 on enclosed inquiry slip

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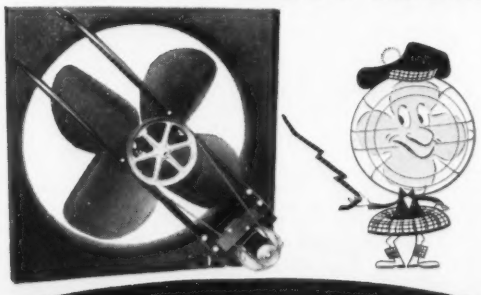
- *CUT DOWN FATIGUE*
- *STEP UP EFFICIENCY*
- *REDUCE LABOR COSTS*



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EXHAUST FANS

Perfectly balanced, deep-pitched blades exhaust large volumes of air, remove heat, odors, fumes, steam. Keep employees refreshed and working at peak efficiency. EMERSON-ELECTRIC Belt-Drive Ball-Bearing Exhaust Fans will give years of smooth, quiet service at low operating and maintenance costs. Five sizes, 24" to 48", capacities up to 19,400 C.F.M. Direct-drive fans in four sizes, 12" to 24". Ask for Catalog No. F-206. THE EMERSON ELECTRIC MFG. CO., ST. LOUIS 21, MO.

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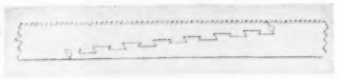
of St. Louis • Since 1890

For more details circle NED-22 F8 on enclosed inquiry slip

DETACHABLE BAND SAW
joined or taken apart in seconds



Interlocking dovetail notches in this interlocking saw band permit it to be securely joined or taken apart in seconds. Holes where the ends join have internal V-grooves and the ends are locked in place by inserting soft steel balls in the holes and flattening them to the band thickness with pliers. Teeth and band retain their original temper, alignment is perfect, and saw operates smoothly. A wide range of sizes and pitches is available for use on most band saws. Made by **Davies Product Engineering Co.**, Box 216, Fraser, Mich.

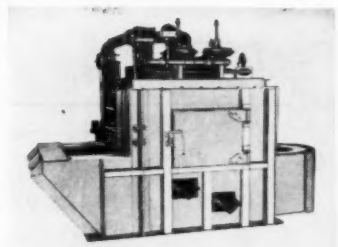
For more details circle NED-23 F8 on enclosed inquiry slip

DIGITAL READOUT
uses simple projection system

Four digits (decimal and 0 through 9), plus a symbol readout with 11 symbols are provided on the Model 471 digital readout. It uses a simple projection system with 7000 to 8000 hours of lamp life. Individual, easily read digits are 1⅛ in. high, and the total display area is 2 in. high by 7.5 in. long. Power requirements are ¼ amp at 6.3 v ac for each symbol or digit that is lit. Readout requires only 3½ in. of vertical space in a standard 19-in. rack mount. Special models with up to nine individual readout units and any combination of digits or symbols, are also available. Units are used with all types of digital converters and encoders. Made by **Cohu Electronics, Inc.**, Kin Tel Div., 5725 Kearny Villa Rd., San Diego 11, Calif.

For more details circle NED-24 F8 on enclosed inquiry slip

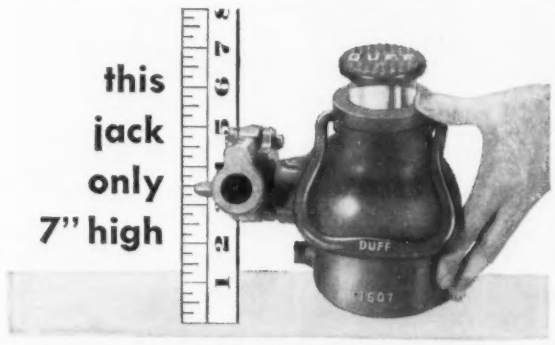
MELTING-HOLDING FURNACES
1200 to 5000-lb capacities



Diecasting, permanent mold casting, and sand casting of aluminum are applications for this combination melting-holding furnace. Capacities range from 1200 to 5000 lb. Furnaces are gas fired and feature automatic temperature control. They are built with or without tap holes for complete draining. A bridged ladle-out well allows constant chlorination and a clean supply of metal. Rejects and back scrap can be charged back on the sloping hearth, eliminating any contamination of the inside of the furnace with inserts. Made by **Sunbeam Corp.**, Industrial Furnace Div., Dept. N.E., 4431 W. Ogden Ave., Chicago 23, Ill.

For more details circle NED-25 F8 on enclosed inquiry slip

this jack only 7" high



This "Shorty" jack (No. 1507) lifts 15 tons 2½ inches yet is only 7" high.

. . . will raise 15 tons

It has no fluids to leak, no cup leathers to wear out, no air or vapor lock—can be used sidewise, or upside down. It's a precision engineered, ball bearing screw jack with fully enclosed one piece malleable housing, seldom needs lubrication or servicing. Thousands of these easy to operate jacks are saving time and money wherever powerful lifting is required under low set loads. Ask your recognized distributor or write for bulletin AD-12-N, Duff-Norton Co., P.O. Box 1889, Pittsburgh 30, Pa.

DUFF-NORTON JACKS
"Giving Industry a Lift Since 1883"

For more details circle NED-26 F8 on enclosed inquiry slip

The TOOL

The TECHNIQUE

For lowest cost per unit processed they're both ANDERSON

Write for complete catalog of wire brushes, with detailed selection and operation data.

Anderson CORPORATION

1048 Southbridge Street, Worcester, Mass.

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New...from RCA

Transistorized...
Miniature "Belt" Radio

RCA PERSONALFONE
2-Way Radio
The 2-Way Radio You Wear!

Small transistorized receiver and transmitter are in two handy leather pouches worn on belt. Perfect for guards, maintenance men, mechanics.

Saves time and money!

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Convenient as a "wrist" radio

RADIO CORPORATION of AMERICA
COMMUNICATIONS PRODUCTS
CAMDEN, NEW JERSEY

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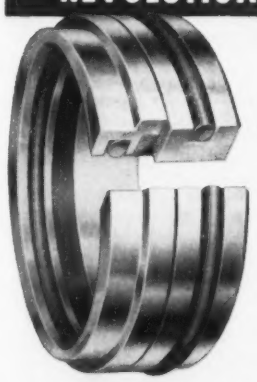
REVOLUTIONARY NEW SEAL



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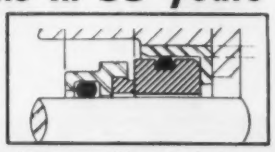
ELIMINATES:
Springs
Set Screws
Spring Stops

First basic improvement in Mechanical Seals in 35 years



SIMPLE TO INSTALL — Self positioning — Does not require dismantling of pump. Magnetic attraction of sealing and mating rings eliminates use of springs. Up to 18 parts eliminated. Sealing contacts always positive and even. Seal is so thin it will fit in shallowest of boxes. Complete brochure on request. A. W. CHESTERTON CO., 15 Ashland St., Everett 49, Mass. — America's Oldest Manufacturer of Mechanical Packings.

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Check with LYNAIR FIRST! ON YOUR AIR AND HYDRAULIC CYLINDER REQUIREMENTS

REGARDLESS OF YOUR NEEDS WE CAN SUPPLY THEM

Check these Advantages

- We engineer and manufacture Air and Hydraulic Cylinders for every application
- Cylinders meet J. I. C. standards
- Airdraulic cylinders for controlling feed in both directions
- New design Piston Packing assures minimum of bypass on hydraulic cylinders
- Complete range of sizes, 1½" bore through 8" bore, standard. Larger sizes on request.
- A full range of Air and Hydraulic Boosters.

Delivery to meet your requirments.

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LYNAIR Inc. 3100 E. MICHIGAN AVE. JACKSON, MICHIGAN

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AIR COMPRESSOR or Dry Vacuum Pump . . . Air Cooled Up to 25 lb. Pressure

COMPACT FAN-COOLED

ROTARY DESIGN LOW PRESSURE

Offers substantial power and cost savings. Pressures up to 25 lb. gauge (vols. to 84 CFM) or vacua up to 20" Hg continuous service (28" intermittent). No stuffing boxes, belt drives, or speed reducers. High efficiency. Handles ammonia and other gases. Pulsation-free discharge, no cushion tanks needed. Continuous lubrication. Lightweight composition blades. This unit in use for 5 years on our own products where extreme dependability is required.

Send for Catalog 7206 YEOMANS

2000-4 North Ruby Street, Melrose Park, Illinois

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HEATING PROBLEMS?

Get help in a hurry from Chromalox

SEE OUR CATALOG IN SWEET'S PLANT ENGINEERING OR PRODUCT DESIGN FILE OR WRITE FOR COPY

Four pages of answers to all types of industrial and comfort heating problems. Application information, design features, complete data on sizes, ratings, temperatures to 1200°F. Controls and accessories. Also address listings of Chromalox Sales Engineering Representatives.

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For on-the-spot help, pick up the phone and call your Chromalox Representative. He has more than 15,000 standard types, sizes and ratings from which to select the best heater for your job.

For new or existing installations, Chromalox has: the world's most complete line of electric heating . . . the world's largest stock, for immediate shipment . . . personal "no obligation" assistance . . . factory design-engineering service for special applications. Chromalox answers are fast, clean, safe, accurate and economical. Call your Chromalox Man or write today.

2658

CHROMALOX Electric Heat INDUSTRIAL • COMMERCIAL • RESIDENTIAL

EDWIN L. WIEGAND COMPANY
7509 THOMAS BOULEVARD • PITTSBURGH 8, PA.

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NEW EQUIPMENT DIGEST

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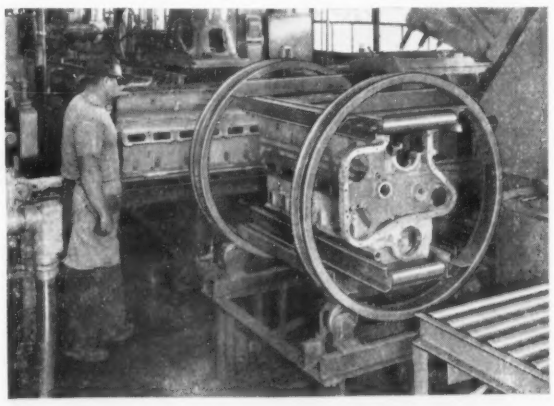
BPA NBP

SEALING COMPOUND prevents butane, propane gas leaks

Leak Lock joint sealing compound is now UL-approved for preventing leaks in equipment and lines carrying butane and propane gas. Previous uses included sealing against such reactive substances as gasoline, oil, petrochemicals, and refrigerants. Made by Highside Chemicals, Inc., 14 Colfax Ave., Clifton, N. J.

For more details circle NED-33 F8 on enclosed inquiry slip



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"Upside down efficiency" that's a good way to describe the work of this member of the Logan Conveyor family. In case you haven't seen a Roll-Over, it consists of a circular framework carrying a section of Roller Conveyor. The load is revolved manually around its center of gravity with very little effort . . . ideal for positioning heavy castings or unloading tote pans.

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Logan Conveyors

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How To Design Your WIRE CLOTH STRAINER

This new ENGINEER'S MANUAL takes you on a step-by-step course of designing wire cloth strainers to meet your own special requirements. Discusses weaves, meshes, metals, shape and construction, flow rate, fabrication processes. Write today for your free copy.

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MICHIGAN Draws the Wire Weaves the Cloth Fabricates the Part in one continuous production line

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how much can you SAVE on loading, sealing or imprinting corrugated cases?

Put your production-line in high-gear with fully-automatic Packomatic machines which go all the way — or any part of the way — with corrugated shipping containers. Install a new packaging line or add to your present operation. Automate to save time, money. WRITE FOR COMPLETE BROCHURE No. 50A on forming, loading, sealing and imprinting equipment.

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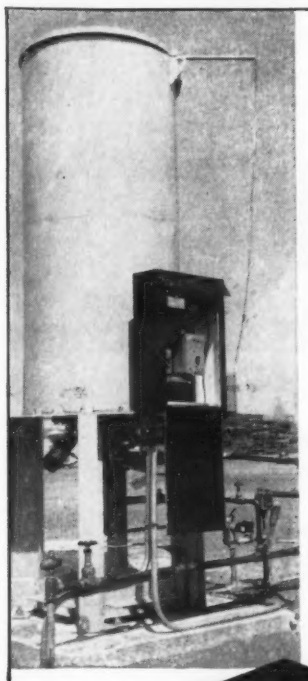

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No smoke! No ash!

Prenco Smoke-Free Incinerators completely consume paints, varnishes, thinners, sludges, hydraulic oils, petroleum spirits, solvents, machine shop wastes, chemical wastes or any other combustible waste fluids. Easy to start . . . operate automatically for extended periods at extremely low costs . . . provide the perfect solution for industrial waste disposal problems. Write for complete information today.

PRENCO

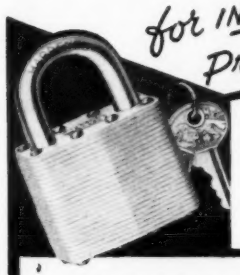
INDUSTRIAL INCINERATORS

Prenco Products, Inc., 507 E. 10 Mile Road, Hazel Park, Mich.

For more details circle NED-38 F8 on enclosed inquiry slip

Master PADLOCKS

for INDUSTRIAL Protection

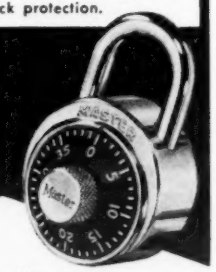


FAMOUS MASTER Laminated Padlocks

Multiple steel plates . . . stronger than a solid block! Genuine brass-cylinder, pin-tumbler security. No finer padlock protection.

STAINLESS STEEL Combination Padlocks

Double-wall construction . . . 3 number brass locking mechanism. Available with "Key-Control" — one control key opens all locks.



FREE BROCHURE

Condensed, easy to use information on the Master padlocks most widely used for industrial applications. Write today.

Master Lock Company, Milwaukee 45, Wis.

World's Largest Padlock Manufacturers

For more details circle NED-39 F8 on enclosed inquiry slip

NEW STRUCTURAL MATERIAL

ElastaCAST®

* Licensed under U. S. Pat. 2,764,565

Tougher than Most Metals!

Precision cast to specified shapes, this newest structural material offers unusual mechanical properties and service life making it a much desired choice over metals, nylon and other non-metallics for many applications. ElastaCAST*, a urethane rubber, utilizes inexpensive fabricating techniques to produce component parts at new low unit costs.

Property advantages such as high tensile strength 4,000 psi. to 7,300 psi., wide range of hardness — 62 to 92 Shore A and excellent abrasion and tear resistance make it a must in your requirements for progressive design and greater functional efficiency.

Send for the ElastaCAST Engineering Notebook.

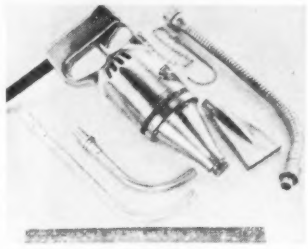
Natural and Synthetic Rubber parts precision-molded to your specifications.

ACUSHNET PROCESS COMPANY
NEW BEDFORD MASSACHUSETTS

Address all communications to 782 Belleville Ave., New Bedford, Mass.

For more details circle NED-40 F8 on enclosed inquiry slip

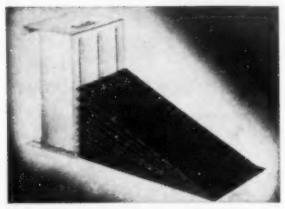
ELECTRIC HEAT GUN provides instant heat to 450° F



Heating element of this 1000-w electric heat gun is completely enclosed and protected from grease and dirt in an asbestos-sheathed housing. Gun provides instantaneous heat up to 450° F for thawing frozen equipment; drying parts and paint; preheating molds; and softening, shaping, fusing, and welding plastics. Motor and heating element operate on 25 to 60-cycle 110 v ac or dc. Long and short goosenecks, wide nozzle, flexible hose, and chain and hook for suspension are attachments. Made by **United States Electrical Tool Co.**, 3642 Llewellyn St., Cincinnati 23, Ohio.

For more details circle NED-41 F8 on enclosed inquiry slip

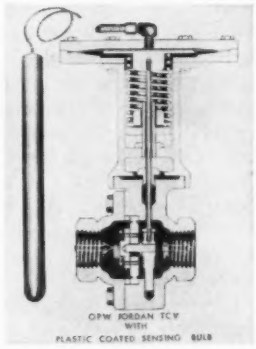
SHEET STEEL SEPARATOR magnetically separates oily blanks



Enclosed in a welded stainless steel case, the Magni-Power sheet separator is designed to prevent damage or pilferage of inside elements. It efficiently separates oily steel sheet and blanks for operator feeding of presses, shears, and other equipment. Vertical ribs on the magnetic surface offer a minimum of friction resistance and provide one-point contact for quick separation. The top plate is extended and formed as a handle. Various sizes and strengths are available. Made by **Magni-Power Co.**, Dept. 20, Wooster, Ohio.

For more details circle NED-42 F8 on enclosed inquiry slip

TEMPERATURE CONTROL VALVES have plastic coated sensing system



Entire thermal bulb and capillary tubing system of OPW-Jordan sliding gate temperature control valves is heavily coated with a protective heat-conducting plastic film. This affords corrosion resistance to a variety of chemicals at up to 185° F. Used in plating tanks, chemical tanks or heaters, and other corrosive applications, valves are offered in ¼ through 2-in. sizes. Capillary tubing is available in 8 and 15-ft lengths, as well as special lengths. Made by **OPW Corp.**, Jordan Industrial Sales Div., Dept. NED, 6013 Wiehe Rd., Cincinnati 13, Ohio.

For more details circle NED-43 F8 on enclosed inquiry slip

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Guards against switch being thrown on when men are working on line, repairing, oiling and adjusting machines, and other equipment. Accommodates up to 6 padlocks. Ruggedly made. 8¼" long. Weighs only 10 ozs.

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2807 N. 4th St., Phila. 33, Pa.

SAFETY MULTIPLE LOCKOUT

INDUSTRIAL PRODUCTS COMPANY
2807 N. Fourth Street, Philadelphia 33, Pa.

Please send literature and price on Safety Multiple Lockout.

NAME_____

TITLE_____

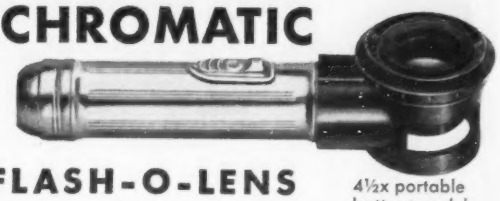
COMPANY_____

ADDRESS_____

For more details circle NED-44 F8 on enclosed inquiry slip

it's SHARP . . . it's CLEAR when you inspect with . . .

PIKE 4½ power ACHROMATIC



FLASH-O-LENS illuminated magnifiers

4½x portable battery model; also electric "plug-in" models

- sharp focus
- adjustable image
- built-in illumination
- quick conversion to 7, 20 or 40 power with interchangeable lenses

20x or 40x

WRITE TODAY for literature showing uses, types, prices

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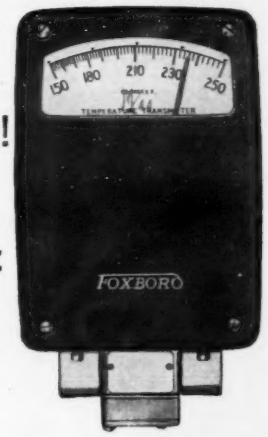

INDICATING TEMPERATURE TRANSMITTER

uses any filled thermal system

Here's a brand new economical instrument engineered specifically for the job of indicating *and* transmitting temperature. Compact and lightweight (10 lbs.), its indicating scale and fluorescent red pointer are visible up to 20 feet away. The M/44 is made with standard, performance-proved Foxboro components — withstands corrosive atmospheres. Changing range or type of thermal system can easily be done in your own plant. Ranges from —450 to +1000F. Write today for Bulletin 13-28A. **The Foxboro Company, 666 Neponset Foxboro, Mass.**

FOXBORO Instrumentation
REG. U.S. PAT. OFF.

For more details circle NED-46 F8 on enclosed inquiry slip

ADAMS creates a Cyclone to give you Drier Compressed Air

The Adams Aftercooler and Cyclone Separator are a perfect team. The highly efficient aftercooler condenses more moisture . . . the separator's unique design creates a cyclone to remove more of the condensation.

Write today for all the facts . . . Get your copy of Bulletin 711.

R. P. ADAMS CO., INC. 227 E. PARK DRIVE BUFFALO 17, N. Y.

For more details circle NED-47 F8 on enclosed inquiry slip

if you use...
OPTICAL CHART-GAGES
SIGHT-GAGES
OPTICAL GRINDER CHARTS
PRINTED CIRCUIT MASTERS
TRANSPARENT TEMPLATES
INSTRUMENT SCALES
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GET BETTER TRANSPARENT LAYOUTS WITH FASTLINE COATED PLASTIC

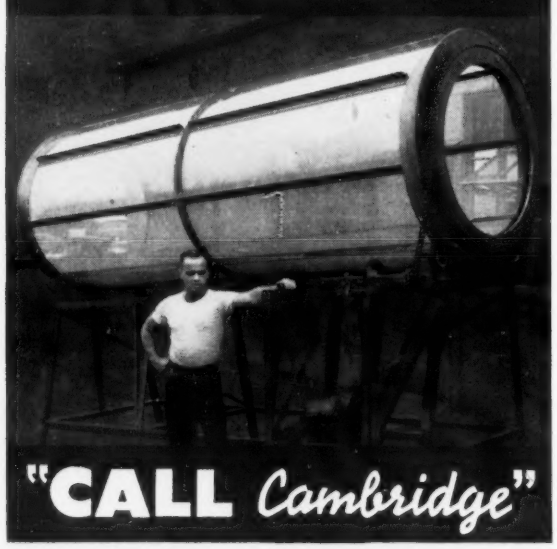
With FastLine "Do it yourself" coated plastic you can produce transparent layouts with accurate, easy to read lines—professional layouts for chart-gages, sight-gages and many other purposes. What's more, you can make them right in your shop—on the job—as you need them—when you need them. After scribing is completed, FastLine chart-gages are ready for use in minutes.

Find out how you can put FastLine to work for you. Write Dept. XX for full information.

OPTICAL GAGING PRODUCTS, Inc.
26 FORBES STREET
ROCHESTER 11, N. Y.

For more details circle NED-48 F8 on enclosed inquiry slip

"WIRE CLOTH FABRICATIONS?"



"CALL Cambridge"

"You tell us what you need, and we'll have it for you fast—whatever the size or shape"

Roland's right, too. Here at Cambridge he's part of a team that has produced everything from thimble-sized strainers to king-sized dewatering screens, often well ahead of schedule. Whatever your requirements, you're assured of quality workmanship and prompt service when you call Cambridge. And, we'll work from your specifications or draw up prints for your approval.

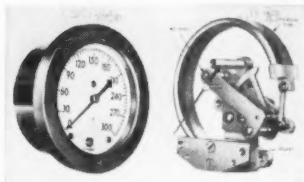
TO MEET YOUR BULK WIRE CLOTH NEEDS, we have a wide variety of specifications from the finest to the coarsest mesh—in any metal or alloy—in the most frequently used specifications ready for immediate shipment. Individual loom operation and careful inspection just before shipment assures accurate mesh count and uniform mesh size.

Let us quote on your next order for wire cloth. Call your Cambridge Field Engineer listed in the telephone book under "Wire Cloth". Or write direct for FREE 94-PAGE CATALOG and stock list giving the full range of wire cloth available. Describes fabrication facilities and gives useful metallurgical data.

The Cambridge Wire Cloth Co.
WIRE CLOTH | METAL-MESH CONVEYOR BELTS | WIRE CLOTH FABRICATIONS
DEPARTMENT C, CAMBRIDGE 6, MARYLAND
OFFICES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle NED-49 F8 on enclosed inquiry slip

PRESSURE GAGES
several movement types offered



Accuracy within 1 per cent of scale range for the middle half of the scale and 1½ per cent for the remainder enables the A-Line of general purpose pressure gages to meet ASA Grade A standards. Working parts are removable as a unit in all but the smallest size to simplify maintenance. Available movements include deep-bushed brass, all stainless steel, and Supergauge nylon-stainless steel types. Phosphor bronze and Type 403 or 316 stainless steel Bourdon tubes are offered. Dial sizes are 3½, 4½, 6, 8½, and 12 in., and pressure ranges are from 10,000 psi down to 30 in. Hg vacuum. Compound (pressure and vacuum) ranges are also offered. Cases of various materials have back or front flange for front-of-board or panel mounting. Made by **American Machine & Metals, Inc.**, United States Gauge Div., Dept. NED, Sellersville, Pa.

For more details circle NED-50 F8 on enclosed inquiry slip

ELECTRONIC PRESS DRIVE
allows reverse jogging of press without stopping and reversing motor

Reverse jogging of a press without stopping and reversing the motor is possible with this Accutrol electronic press drive. Thus, it is possible to back away at once and save time when setting large dies. Drive also allows rapid advance to work, compensated automatic slow down to prevent tearing blanks, and a fast return.

Normal clutching and braking are controlled by servo system which electronically compensates for thermal and kinetic variations. Drive brakes against itself by using alternating current to create a reverse rotating magnetic field between rotor and field windings. As backshaft slows, the alternating current continues to drive the flywheel, putting energy back into flywheel system. Alternating current can also be made to re-accelerate the flywheel to full speed, returning energy to the flywheel over and above that already restored.

Electronic in both power and control, drive delivers alternately, direct and alternating current to induction winding. Power is supplied through mercury-pool Ignitrons. Servo system coordinates analog and digital signals. Made by **E. W. Bliss Co.**, 1376 Raff Rd., S.W., Canton 10, Ohio.

For more details circle NED-51 F8 on enclosed inquiry slip

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largest...most complete catalog and price list of

stud bolts & threaded rod

Rough & Milled Stud Bolts
Non-Ferrous Stud Bolts
Stainless Steel Stud Bolts
Threaded Wires
Continuous Threaded Bars
Alloy Steel Stud Bolts
All Metals; ASTM & Military Specs.

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WRITE, WIRE, PHONE FOR YOUR COPY TODAY.

R.E.C. Corporation
AMERICA'S #1 STUD BOLT SOURCE
51 Cedar Street, New Rochelle, New York

For more details circle NED-53 F8 on enclosed inquiry slip

● *Centerless Ground to extreme accuracy. Special new-type Equipment, assures concentric chamfered or formed ends—no cut-off burrs.*

Dowel—Straight—Countersunk—Angle and Spherical Ends
.020" to .1875" Diam.
.125" to 2" Length

Precise Specifications Accurately met. If requested on order, a surface analysis tape, showing surface in micro-inch measurements, will be furnished. Tape magnifies 39,370 times.

Small orders or volume production to your exact requirements and material specifications.

Quality Precision Work!
Prompt Deliveries!
Prices you will like!
SEND US PRINTS FOR QUOTATION

COMMERCIAL CENTERLESS GRINDING COMPANY
6605 CEDAR AVE., CLEVELAND 3, OHIO
Phone: ENdicott 1-3412

For more details circle NED-54 F8 on enclosed inquiry slip

New Push-Button Dispenser for Mac's Waterless Hand Cleaner

Now, cut hand cleaner bills 60%! Beautiful copper-finish aluminum dispenser measures exact amount of hand cleaner needed. Mac's Waterless Hand Cleaner acts fast to remove deep, imbedded grease, ink, paint and grime. Contains lanolin to prevent dryness and chapping. Dispenser regularly sells for $9.00. Now, for a limited time only, you can get the dispenser *plus three 5 lb. cans of Mac's Waterless Hand Cleaner* for just $9.84. Over 100 jobbers carry warehouse stocks. If yours cannot supply you, order direct for prompt prepaid shipment.

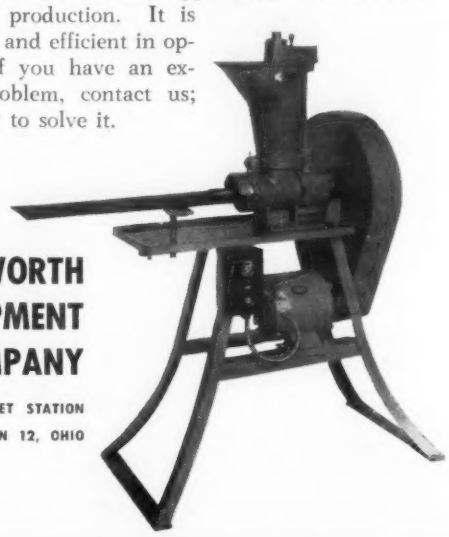
Mac's Super Gloss Co., Inc.
6042 North Figueroa Street, Los Angeles 42, Calif.

For more details circle NED-52 F8 on enclosed inquiry slip

RAPID CORE EXTRUDING MACHINE

The machine can be used to extrude various materials for many applications where an extruded shape is needed. A wide range of shapes can be produced: rounds, squares and irregular sizes from 3/8" to 3".

The machine was primarily designed for extruding foundry cores. However, it is also being widely used in a multitude of industrial applications such as laboratories and production. It is low in cost and efficient in operation. If you have an extruding problem, contact us; we will try to solve it.

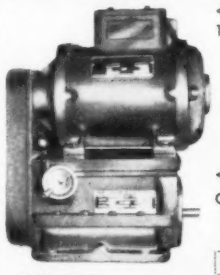


WADSWORTH EQUIPMENT COMPANY

BOX 6122 ELLET STATION
AKRON 12, OHIO

▲ For more details circle NED-55 F8 on enclosed inquiry slip ▲

SAVE! WAR SURPLUS Gov't. Cost $650 BRAND NEW!



1½ HP Motor Driven (single or 3-phase)
VARIABLE SPEED
HYDRAULIC
SPEED REDUCER
with
Instantaneous *REVERSING!*

Output Speed Reversible in either direction from 0 to 750 R.P.M.

FULLY GUARANTEED

ONLY $122 fob

#VS 143M with 3-phase, 220-Volt Motor

USE FOR: Lathe heads, reamer drives, conveyors, printing presses, cream separators, garden tractors, midget cars, pumps, blowers, canning machines, test benches, etc.

DRIVEN BY a 1½ HP Ball Bearing Westinghouse motor to obtain variable speed in either direction of rotation. Reversing is independent of speed control and EFFORTLESS! Ideal for CONTINUOUS REVERSING operations! Speed selection made by rotating hand wheel—gives infinite number of speeds thru entire range of unit.

UNIT consists of a 1½ ELECTRIC motor (220 Volt, single or 3-phase) driving a variable displacement hydraulic pump which in turn drives a fixed displacement hydraulic motor. Electric motor drive is positive, thru silent chain and sprocket, enclosed in oil tight guard. Transmission is self contained in sealed 1 qt. capacity aluminum oil reservoir with separate controls for speed variation and reversing. Input and output shafts are ⅝" dia., standard keyway. Weight 32 lbs. Size: 11" long, 7½" wide, 7½" high. Supplied with complete instructions and 2 qts. hydraulic oil.

 # VS-141M with 1 phase, 220 Volt Capacitor Motor . . . $143.50 fob

If there is any doubt to the adaptability to your particular application, we will accept your purchase order with the understanding that the unit *may be returned* for FULL credit of purchase price.

Write, Order, or Phone TAylor 9-1365
ROBERTS ELECTRIC CO., Dept., ND-815
849 W. GRAND AVE. CHICAGO 22, ILL.

▲ For more details circle NED-56 F8 on enclosed inquiry slip ▲

30 YEARS of Engineering Skill and Manufacturing Prowess

30th KISCO tomorrow's ENGINEERING... TODAY

Automation at its best in
KISCO—MATIC WATER SOFTENERS

Completely dependable, fully automatic in operation . . . supplying all the pure rain-soft water you need without manual attention.

No Switches
No Levers
No Valves to Turn
Nothing to Set
Nothing to Forget

Write for Catalog

Tomorrow's Engineering . . . TODAY

Kisco Boiler & Engineering Co.
2400 DE KALB ST. ST. LOUIS 4, MO.

▲ For more details circle NED-57 F8 on enclosed inquiry slip ▲

ADDRESS MASTERS
separate into four address slips

Clean, easy to handle address masters are perforated to separate into four address slips for use in Master addresser machines. Typing guide lines and instructions are printed on the face of each unit. Strip coated hecto carbon for duplicating purposes is incorporated in the collated set. Address masters are packaged in boxes of 125 sets (500 address slips). Made by **Master Addresser Co.**, 6500E W. Lake St., Minneapolis 26, Minn.

▲ For more details circle NED-58 F8 on enclosed inquiry slip ▲

SMALL TAPE RECORDER
transistorized, battery operated

Standard tape speeds of 1⅞, 3⅜, and 7½ ips are available on the Phono-Trix transistorized tape recorder. The 3½ x 4 x 6½-in. unit has automatic volume control and incorporates a playback speaker. Power is furnished by four standard Size D flashlight cells. Other features include dual track recording, 3-in. reels, fast rewind, automatic erase, and accessory cord for operation from a 6-v automobile battery. Up to 70 min of recording is obtained per reel. Price, including microphone, is $99.50. Sold by **Burke & James, Inc.**, 311 S. Wabash Ave., Chicago 4, Ill.

▲ For more details circle NED-59 F8 on enclosed inquiry slip ▲

ELECTRIC FUEL PUMP
delivers up to 60 gph

Up to 60 gal of gasoline can be delivered per hour by Model 240-A electric fuel pump which features a built-in automatic pressure regulator. Pump will develop over 8 psi, but can be adjusted to lower pressures. High delivery rate is made possible by oversize piston, coil, and power spring. Regulator prevents pressures higher than predetermined setting and acts as a surge chamber to even the flow of gasoline to carburetor. If vapor appears in line, pump accelerates in speed until vapor is expelled. Pump adapts to any gasoline engine used for any purpose. Made by **Stewart-Warner Corp.**, Dept. NED, 1826 Diversey Parkway, Chicago 14, Ill.

▲ For more details circle NED-60 F8 on enclosed inquiry slip ▲

NEW PORTABLE DEWPOINT INDICATOR

PERMITS CONTINUOUS READINGS
MEASURES LOW DEWPOINT TEMPERATURES

With the new W-C Dewpoint Indicator, you can make continuous moisture-content measurements . . . you don't have to purge the instrument of the test gas for each check. That means easier, faster readings. Accurate readings, too—within ±5° at any point on the dewpoint temperature range of ambient to −100°F.

Lightweight and compact, the Indicator has self-contained power supply, uses standard ⅛-inch pipe fittings for gas connections. It sets up in a jiffy to give you quick and reliable moisture-content readings when and where you want them.

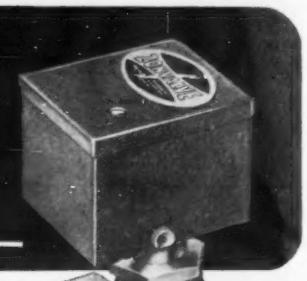
For complete information, send for Bulletin DPI-4.

W-C also manufactures Dewpoint Recording Instruments for a variety of monitoring and control applications. Bulletin DPR-5 gives full details.

WEIGHING & CONTROL COMPONENTS, INC.
206-L Lincoln Ave., Hatboro, Pa. S.A. 1742

▲ For more details circle NED-61 F8 on enclosed inquiry slip ▲

CUT FUEL COSTS up to 40%—



with easy-to-install **ZONVALVE**

¾" I.P.S. shown

ZONVALVE automatically cuts off heat to vacant rooms, regulates heat in occupied rooms. This new, thermostatically-controlled motorized valve replaces ordinary radiator valve with *no plumbing change*, no shut-down of heating system.

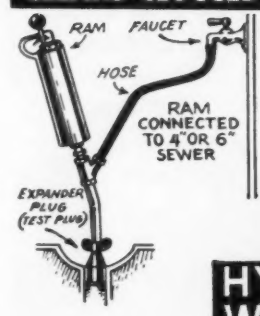
ZONVALVES are made in all standard pipe and tubing sizes. *Low wiring cost* – because all necessary wiring is low voltage.

Designed for steam and hot water systems. Ideal for institutions, hotels, motels, etc. *Unconditionally guaranteed.*

for details write to **HEAT-TIMER CORP.** DEP'T. O-1
657 BROADWAY, NEW YORK 12, N. Y.

▲ For more details circle NED-62 F8 on enclosed inquiry slip ▲

CLEARS CLOGGED DRAINS in Seconds!



The ideal plumbing service tool. Can pay for itself in one application!

Smashes through the most stubborn blockages, then flushes clean — all in one operation!

Comes equipped with self-contained manual compressor (can charge Ram to 100 lbs. in 30 seconds!) and drain adaptors in 6 sizes!

HYDRAULIC WATER RAM

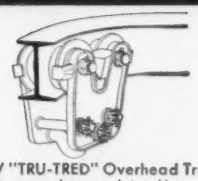
Anyone can operate it! Thousands already in use, have saved *millions* of dollars in industry and institutions. Why lose time, suffer inconvenience, waste dollars needlessly on either completely blocked or slow-moving sewers, drains, fixtures? The HYDRAULIC WATER RAM clears severest stoppages with SPLIT-SECOND HYDROSTATIC IMPACT! . . . Shatters blockage, then flushes clean. No snakes, chemicals, cables. No pushing through. Works perfectly, *vent or no vent!* Nothing to wear out. You risk nothing on our 30 day free trial offer, at our expense. Write for details.

Works perfectly with all clogged fixtures, toilets, sinks, urinals, etc. Equipped with 4" rubber cone, ideal for toilets, plus set of 5 tapered adaptor plugs for other drains or sewers.

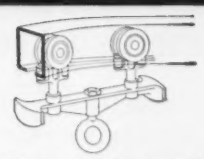
Write for Information, Prices, Free Trial Offer — Today!
HYDRAULIC MANUFACTURING CO.
DEPT.-NED-6 KIEL, WISCONSIN

▲ For more details circle NED-63 F8 on enclosed inquiry slip ▲

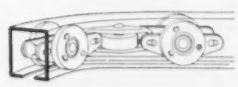
R-W OVERHEAD CONVEYORS
. . . a type and size to meet your exact requirements!



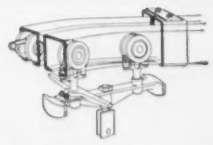
R-W "TRU-TRED" Overhead Track Systems . . . heavy-duty Monorail Systems capable of carrying up to 8,000 lbs. Available in a complete range of sizes. Designed to provide years of dependable trouble-free operation. Request Catalog No. A-64.



R-W "SAFE-RAIL" Overhead Conveyors include a complete range of enclosed trolley track and equipment that will easily handle up to 1,000 lb. loads quickly and efficiently. Request Catalog No. A-94.



R-W "ZIG-ZAG" Continuous Powered Conveyors. Extremely flexible . . . carries unit loads up to 125 lbs. Economical to purchase and install. Easily modified, relocated or extended by plant personnel. Request Catalog No. A-93.



R-W "TWIN-TRAK" Overhead Automatic Dispatch System consists of one or more power tracks and as many free or storage tracks as desired. Provides automatic selective control over product movement through an entire plant. Request Catalog No. F-192.

RICHARDS-WILCOX MFG. CO.
435 W. THIRD STREET • AURORA, ILLINOIS • Branches in Principal Cities

▲ For more details circle NED-64 F8 on enclosed inquiry slip ▲

BREATHE EASIER
in Dust, Fumes, Smoke

with Dupor No. 4
RESPIRATOR

Double filters provide comfortable breathing. Soft rubber face mask gives air-tight fit. Sanitary face cloth protects against dermatitis or chafing. Patented exhalation valve guards against re-breathing stale air.

Cover scientifically designed respirators have been adopted as standard equipment by industries the world over. Free literature on request describing models for every purpose. See your safety equipment supplier or order sample direct. Model shown—only $2.00 postpaid.

H. S. COVER, Dept. 605 South Bend 14, Indiana
"Respirators for Industry since 1894"

For more details circle NED-71 F8 on enclosed inquiry slip

Hammerlok®
COUPLING LINK

MAKE UP YOUR OWN HERC-ALLOY SLINGS. No more waiting for new or repaired assemblies to reach you from the factory.

- No peening or welding
- Anybody can assemble
- Stronger than Herc-Alloy chain
- Thoroughly field tested
- Re-useable and SAFE

Made by the makers of Herc-Alloy, the original alloy steel chain. Write for instruction folder.

CM HOISTS AND CHAIN

COLUMBUS McKINNON CHAIN CORP.
TONAWANDA, NEW YORK
Regional Offices:
NEW YORK • CHICAGO • CLEVELAND
In Canada: McKinnon Columbus Chain Ltd., St. Catharines, Ont.
HERC-ALLOY®

For more details circle NED-72 F8 on enclosed inquiry slip

NEW MINIATURE AGASTAT® time delay relay

for missile, aircraft and electronic applications

INSTANTANEOUS RECYCLING . . . reset time—less than .020 seconds
UNAFFECTED BY VOLTAGE VARIATIONS . . . time delay remains constant from 18 to 30 volts DC
ADJUSTABLE . . . time delays from .030 to 120 seconds
CHOICE OF OPERATION . . . for either energizing or de-energizing
SMALL . . . height—4⅝" . . . width—1 13/16" . . . depth—1½"
LIGHT . . . maximum weight—15 ounces
MEETS ENVIRONMENTAL REQUIREMENTS OF MIL-E-5272A

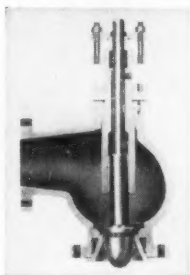
This new AGASTAT time delay relay is an externally adjustable, double-pole, double-throw unit. It incorporates the basic AGASTAT timing principle, proved by a half-century of reliable operation on automatic aids to navigation, in a space-saving miniature unit built to withstand the rugged environmental conditions of missile and aircraft applications.

For specific information on the new AGASTAT relay for your application, write to Dept. A30-65

AGA DIVISION
ELASTIC STOP NUT CORPORATION OF AMERICA
1027 Newark Avenue, Elizabeth, New Jersey
Pioneers in pneumatic timing

For more details circle NED-73 F8 on enclosed inquiry slip

HIGH PRESSURE VALVES
1 to 14-in. sizes for 2500 psi

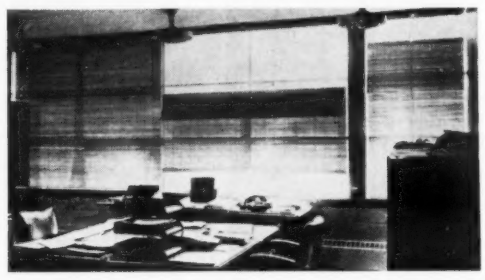


Streamlined contours are built into the body of single-seated Conoflow S high pressure control valves. Self-sealing bonnet, oversized stem and stem guide, Venturi seat ring, and parabolic plug for tight shut-off are other features. Valves are suited for handling erosive and corrosive slurries, coking oils and liquids, and high pressure pipe line gases, steam, and water. Sizes 1 to 4 in. carry ASA ratings to 2500 psi; sizes 6 and 8 in. to 1500 psi; and sizes 10, 12, and 14 in. to 300 psi. Smaller sizes are equipped with cylinder Conomotor topworks, a pneumatically positioned power actuator which provides sensitive throttling in response to standard 3-15 psi instrument signals. Larger sizes with high power requirements have a Rotomotor actuator, a pneumatic unit capable of handling stem loads up to 60,000 lb. Made by **Conoflow Corp.**, Dept. D-4, 2100 Arch St., Philadelphia 3, Pa.

For more details circle NED-74 F8 on enclosed inquiry slip

SLAT-TYPE WINDOW SHADE
rolls open from top or bottom

Glare-free light can be admitted to a room, regardless of the sun's position, by adjustment of the Temlite Loomwood wooden slat window shade. The free-



hanging shade may be dropped from the top at the same time it is rolled up from the bottom to obtain exact light control. Outdoor light can be made to flood the upper part of a room, while the eyes are shielded at chair or desk level. Shade is woven from beveled basswood splints. It is available in various decorator colors, or specific colors can be matched. Variety of custom sizes are furnished. Cost, with hardware, is about 85 cents per square foot. Made by **Consolidated General Products, Inc.**, Dept. NED, 24th & Nicholson Streets, Houston 8, Tex.

For more details circle NED-75 F8 on enclosed inquiry slip

Analog Computer

Mid-Century Instrumatic Corp.—Detailed description of the Model MC-400 desk-side analog computer is found in an 8-page illustrated brochure. It has 12 operational amplifier channels. Its components are described and typical applications are given.

For more details circle NED-76 F8 on enclosed inquiry slip

Buschman

Portable yet rugged . . . Now ALUMINUM gravity conveyors by Buschman make it easy to set up efficient systems "on the spot" for efficient handling in all types of industry.

"QUICK-EEZ" Coupling—both ends the same—keeps your system *flexible* for cost cutting—customized handling. Rearrangement is faster—more economical.

NEW Bulletin 19 gives complete specifications on Buschman ALUMINUM Wheel & Roller Conveyors. Write today!

C-847-EWB
Every Way Better
EWB
THE E. W. BUSCHMAN CO.
4482 Clifton Avenue Cincinnati 32, Ohio
CONVEYORS FOR EVERY INDUSTRY

For more details circle NED-77 F8 on enclosed inquiry slip

Break the Cost Barrier and Eliminate Backbreaking Effort with . . .

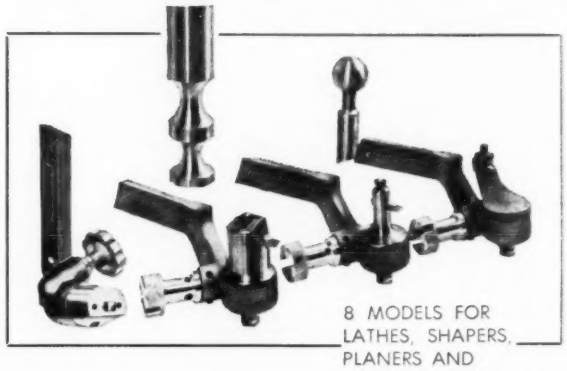
AMERICAN Load-Lift
Skid and Pallet Trucks

For easy handling of 2000, 3000, 4000 or 6000 lb. loads. It's industry's most economical way to handle skids and pallets. Write for New Catalog.

The American Pulley Company
PHILADELPHIA 29, PENNSYLVANIA

For more details circle NED-78 F8 on enclosed inquiry slip

PRECISION
SHAPLANE RADIUS TOOLS



8 MODELS FOR LATHES, SHAPERS, PLANERS AND BORING MILLS . . . . .

Range: ⅜" to 3" for concave radii on lathes. Two sizes for convex radii (Balls up to 2½" dia.) on lathes. Also heavy duty model for radii to 6" on planers, etc.

Write For Circular *Patent Pending*

C. B. TEETER, TOOL ROOM SPECIALTIES
1221 W. Addison St., Chicago 13, Ill. Phone: DRexel 3-3571

For more details circle NED-79 F8 on enclosed inquiry slip

3-WAY CHOICE OF LOCKING BOLTS

Free brochure . . . is handy guide in designing or buying any headed parts.

NYLOK®
. . . self-locking fasteners prevent air and fluid leaks. Stay locked in ANY position . . . won't vibrate loose. Permanent nylon insert won't shrink, dry, age, or turn brittle.

SPIN LOCK
. . . washer-head teeth prevent loosening . . grip tighter under extreme vibration. For oil and water-tight connections.

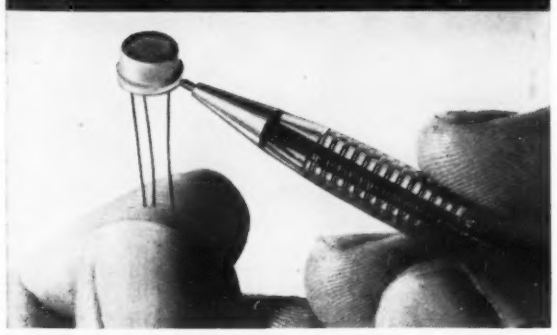
PLACE LOCK
. . . vibration-proof . . . needs no lock washer. Stays wrench tight under shock, impact, rotation, and vibration.

®"The Nylok Corporation"

BUFFALO BOLT COMPANY
Division of Buffalo-Eclipse Corporation
NORTH TONAWANDA, N. Y.

For more details circle NED-80 F8 on enclosed inquiry slip

FREE ANALYSIS
OF YOUR SMALL METAL PARTS JOINING PROBLEMS



Hermetic Seal Welded Without Heating Component!

PROBLEM: weld transistor cap to base, make a hermetic seal without heating internal temperature-critical parts.

SOLUTION: A Raytheon Welding Analyst recommended a DC, (stored energy) welding system, using only 6.6 kva compared to the 75-100 kva required for an AC welder to do the same job.

RESULT: 1500 perfectly uniform welds per hour; no damage from heat.

HOW YOU CAN BENEFIT—
If you have a small metal parts joining problem, see your Raytheon Welding Analyst. Write Dept.NT6—without obligation.

RAYTHEON

RAYTHEON MANUFACTURING COMPANY
Commercial Equipment Division, Industrial Products Dept., Waltham, Mass.

▲ For more details circle **NED-81 F8** on enclosed inquiry slip ▲

Handiest TOOL IN THE PLANT!

CLEMENTS Cadillac® BLOWER-SUCTION CLEANERS

Portable — versatile — economical. Simplest, quickest way to clean motors, machinery and other equipment. Pays for itself in any plant. Ask your dealer for a demonstration.

4 BLOWER-SUCTION MODELS
...including powerful Model HP with 2-speed motor for double duty. Easy starting at low speeds prevents blowing of fuses. All models available with attachments for handling many special tasks.

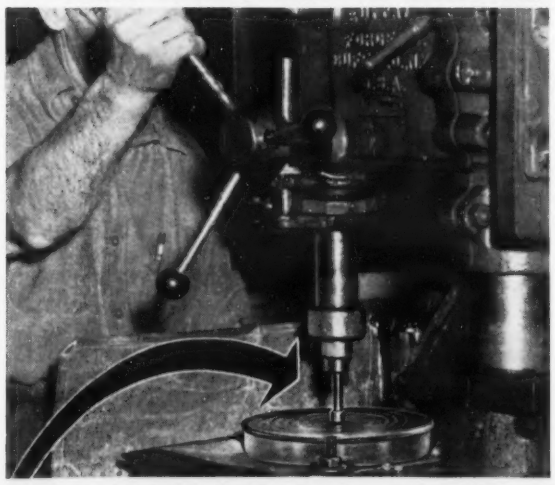
HANDLES 101 CLEANING JOBS
Blows dust, grit, chips and filings from hard-to-reach places. Use it as a *suction* cleaner for all kinds of jobs, or even to salvage bits of rare metal. Other models for annealing, soldering, and for preheating for bending.

BLOWER DIVISION | **CLEMENTS MFG. CO.**
6627 S. Narragansett Ave., Chicago 38, Ill.

SINCE 1910 Specialists in Quality Cleaning Equipment

▲ For more details circle **NED-82 F8** on enclosed inquiry slip ▲

One Hoffman Bit Drills Up to 15,000 Godet Wheels With No Downtime



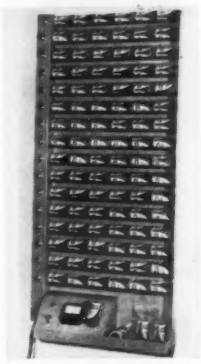
Up to 15,000 Godet Wheels drilled with center hole tolerance 1.5 min. to 1.53 max.—with one Hoffman Laboratory Bit. Actual production figures that are being duplicated by many Hoffman Bit users for precision drilling of glass, ceramics, quartz, etc. Diamond impregnated or oriented surface set.

Write for Illustrated Literature and Prices—FREE

HOFFMAN BROS. DRILLING CO.
SINCE 1902
106 Cedar Street PUNXSUTAWNEY, PENNA.

▲ For more details circle **NED-83 F8** on enclosed inquiry slip ▲

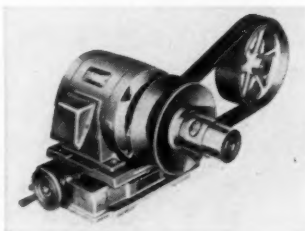
DRY BATTERY REACTIVATOR
restores run-down flashlight cells



Designed to reactivate run-down Size D flashlight batteries, this Dry-Cell battery reactivator is available with capacities of 48 and 96 individual cells. Models contain a voltmeter for determining the condition of each battery before and after reconditioning. Unit plugs into any 115-v ac outlet, and it draws no more current than an average light bulb. Cost of operation is negligible. Only 12 hours are required to fully reactivate run-down batteries. Unit is designed for easy mounting on tool crib or shop wall. Offered by **Semco Sales & Service Co.**, Dept. N, 204 W. Florence Ave., Inglewood 1, Calif.

▲ For more details circle **NED-84 F8** on enclosed inquiry slip ▲

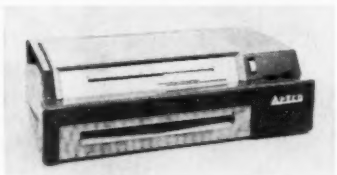
VARIABLE SPEED PULLEY
for ½ to 15-hp applications



Up to 4-to-1 ratios of speed variations are offered by 90 Series Vari-Speed motor pulley, designed for ½ to 15 - hp applications. One of two smooth-face, cone-shaped discs is mounted in a fixed position on the motor shaft, and the other slides laterally on the hub of the fixed disc. A spring automatically maintains belt tension at all output speeds. Speed settings are easily made through a compact motor base with lubricated shifting screw. Separately-mounted countershaft assemblies are available to step up or step down speeds to the driven machine. Auxiliary controls are also offered. Made by **Reeves Pulley Co.**, 1227 Seventh St., Columbus, Ind.

▲ For more details circle **NED-85 F8** on enclosed inquiry slip ▲

PHOTOCOPY MACHINE
one-step, desk top, electric model



Uni-Matic Auto-Stat photocopy machine has a 14-in. width capacity and will reproduce an original document in 19 sec. Operation requires that original and photocopy paper to be inserted only once. Any printed, typed, written, photographed, or drawn original can be reproduced by the desk top electric machine. Price is $423.50. Made by **American Photocopy Equipment Co.**, Dept. NED, Evanston, Ill.

▲ For more details circle **NED-86 F8** on enclosed inquiry slip ▲

mark any wire — faster, at lower cost!

BRADY PERMA-CODE WIRE MARKERS

Self-sticking — go on fast to any type wire. Tell which wire goes where. Cost less than ⅛¢ per lead. All-vinyl, polyester film, glass cloth, aluminum foil, vinyl-cloth. Color coded to meet NEMA specifications.

Write for free working samples — and Bulletin 130.

W. H. BRADY CO.
781 West Glendale Avenue • Milwaukee 9, Wisconsin • Est. 1914

67

▲ For more details circle **NED-87 F8** on enclosed inquiry slip ▲

Get **SQUARE D** **VISIBLE BLADE SAFETY SWITCHES** via **Graybar**
and SEE when you're safe!

No question about it when the new Square D Visible Blade Safety Switch is open. You can SEE at a glance. All Square D Safety Switches have spring loaded fuse clips, too. They maintain positive contact as fuses alternately heat and cool.

For complete information contact your nearest Graybar office, or the address below. Graybar people at over 130 principal cities are ready and anxious to help you with any motor control problem you have. 86

GRAYBAR ELECTRIC COMPANY, INC.
420 Lexington Avenue, New York 17, N. Y.

Call Graybar *first* for . . .
IN OVER 130 PRINCIPAL CITIES

Everything Electrical · GraybaR ELECTRIC COMPANY

▲ For more details circle **NED-88 F8** on enclosed inquiry slip ▲

CM Lodestar®

ENTIRELY NEW... differently NEW

Built to serve you for its normal life without maintenance

Lodestar is the first truly "heavy duty" version of the small electric hoist. It will serve you without costly maintenance or interruptions in your work schedules.

FLEXIBLE LINK CHAIN

CAPACITIES: from ⅛ to 1 ton. Single and 3 phase. ¼ ton model weighs only 51 pounds.

PUSH BUTTON CONTROL

$149.50 and up

WRITE US: Or call your CM distributor for literature, prices and quick delivery from stock.

CHISHOLM-MOORE HOIST DIVISION
Columbus McKinnon Chain Corporation
Tonawanda, New York
Regional Offices: New York, Chicago, Cleveland
In Canada:
McKinnon Columbus Chain Limited, St. Catharines, Ontario

CM HOISTS AND CHAIN

▲ For more details circle **NED-89 F8** on enclosed inquiry slip ▲

RUST-PROOF & DEGREASE
—in one operation

Unlike poisonous chlorinated solvents and ordinary "safety solvents" which do not protect against rust and corrosion, TYPE-R SAFETY SOLVENT forms an invisible rust-proof shield (lasts 2 months) around all metals, while at the same time it safely cleans and degreases. This rust-proofing action doesn't cost a penny, since TYPE-R SAFETY SOLVENT is competitively priced with ordinary "safety solvents" which do not provide this extra protection.

WITH TYPE-R SAFETY SOLVENT

Clean and rust-proof precision instruments, roller bearings, tools, machinery, motors, generators, transformers and all metal parts. TYPE-R SAFETY SOLVENT can be used in wipe, dip or spray applications. It cleans quicker, with greater safety and guaranteed anti-rust protection.

do you use POISONOUS Carbon Tetrachloride?

READ THESE RESULTS

Test conducted by Independent Laboratory

CARBON TET — 10 rats inhaled 125 parts carbon tet per million parts air for 2 days, 30 minutes each day. All 10 rats died!

TYPE-R—10 rats inhaled 125 parts TYPE-R per million parts air for 14 days, 30 minutes each day. All rats alive and healthy after test!

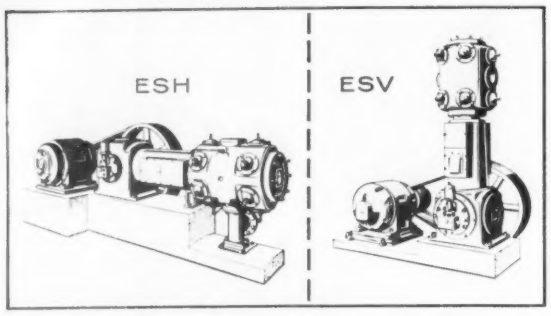
SEND FOR FULL INFORMATION TODAY

The PENETONE Co.
Box ND-658 Tenafly, New Jersey

▲ For more details circle **NED-90 F8** on enclosed inquiry slip ▲

AIR COMPRESSORS

New!



These two new Ingersoll-Rand heavy-duty compressors are actually the same unit, built in either horizontal or vertical arrangement. This brand-new design features completely sealed frame, full-floating aluminum bearings, I-R Type A Channel Valves, and precision-machined running parts which never need fitting or adjustment. Sizes 20 to 150 hp, wide range of pressures, for any air or gas service. Write for more information.

Ingersoll-Rand
I-816 11 Broadway, New York 4, N.Y.

OVER 1000 COMPRESSOR TYPES AND SIZES...FROM 1/2 TO 7500 HORSEPOWER

For more details circle NED-91 F8 on enclosed inquiry slip

- No Erection Required
- Use At Any Height
- Safe, Sturdy, Dependable
- No Loose Parts
- Easily Rolled . . . Easily Raised

For servicing lights and unit heaters . . . for painting . . . for cleaning . . . yes, for any overhead maintenance — you'll do it much faster . . . with greater safety . . . and at less cost with HI-LIFT Portable Work Platform.

Sturdy, all welded steel construction with outrigger brace to prevent tilting or rolling. Small enough to pass through doorway, yet raises to any desired height.

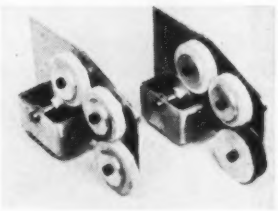
Look around — you'll see HI-LIFT WORK PLATFORMS saving labor, time and money in leading plants coast to coast.

Write for Complete Literature

ATLAS INDUSTRIAL CORP.
853 - 39th Street
Brooklyn 32, N. Y.

For more details circle NED-92 F8 on enclosed inquiry slip

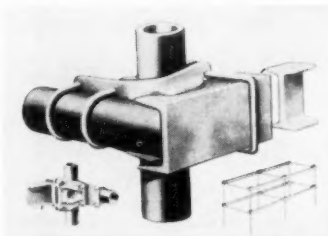
ROLL MARKERS
continuously mark boxes and parts



Model 105-1/2-in. roll liner and bander friction drive is designed for continuous marking of paper boxes or metal parts with a solid line or stripe. It can be used with either kraft paper or opaque ink, as well as paste ink. Unit can be equipped with neoprene or felt ink distribution and lining rolls, or a combination of both. A solid permanent rubber die can be installed on the neoprene lining roll for coding purposes. All wheels have Torrington roller bearings. Ink chamber holds 4 oz of ink. Made by **Pryor Marking Products**, Dept. DW, 434 S. Wabash Ave., Chicago 5, Ill.

For more details circle NED-93 F8 on enclosed inquiry slip

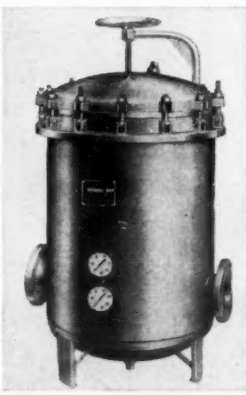
UNIVERSAL CLAMP
for erecting I-beam storage racks



Double-bay storage racks can be constructed from standard channels or I-beams and pipe using this heavy-duty Beam-Strut universal clamp. Pipe is used for vertical members and cross pieces, and channel or I-beam for load bearing members. Clamps are offered in 3 and 4-in. sizes. Storage racks erected with the clamp have load capacities as high as 20,000 lb in a double-bay pallet opening. Racks will also permit double and triple stacking of heavy-duty loads. Made by **Tube-Strut Corp.**, 2960 Marsh St., Los Angeles 39, Calif.

For more details circle NED-94 F8 on enclosed inquiry slip

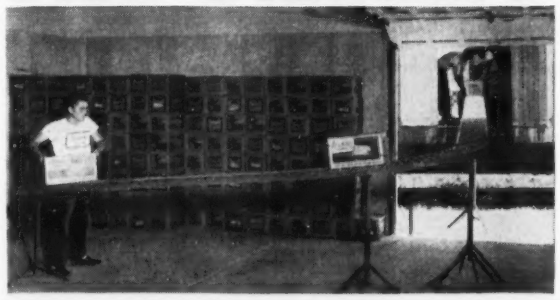
INDUSTRIAL FLUIDS FILTER
in up to 1350-gpm flow rates



Continuous filtration of industrial fluids to microclarity at flow rates has high as 1350 gpm is achieved with steel Fulflo filters. Units with from 24 to 270 ten-inch Honeycomb filter tubes are offered. Standard models operate on 150 psi. Pipe sizes are 2, 3, 4, or 6 in., depending upon capacity. Filter tubes are available in cotton, nylon, Orlon, Dacron, Dynel, acetate, or glass fiber. Swing-bolt cover and cover-lifting davit simplify servicing. Made by **Commercial Filters Corp.**, Dept. NE, 2 Main St., Melrose, Mass.

For more details circle NED-95 F8 on enclosed inquiry slip

Ask Standard



how to solve "spot" handling problems with "Litewate" roller conveyors

HERE'S an economical way to meet production, stacking, and loading needs with "Litewate" straight and curved roller conveyors. Easily carried by one man, easily set up. Durable, too. Available in aluminum or steel models from stock.

For details, see the Standard Engineer listed in the phone book or write — STANDARD CONVEYOR COMPANY, General Office: North St. Paul 9, Minnesota. Sales and Service in Principal Cities. Ask for Bulletin 63E. Address Dept. K-6

50 years of conveyor experience
Standard GRAVITY & POWER CONVEYORS

For more details circle NED-96 F8 on enclosed inquiry slip

The OFFICE VALET

Office Valet Wardrobe Racks keep employees' wraps spaced apart, aired, dry and "in press." They end locker room evils—end crushing of damp clothing in dark lockers and the accumulation of locker debris. They encourage health, discourage theft, build morale and save floor space. Valet units snap-lock together to fit any available space or to give any desired capacity. Accommodate 3 employees per running foot with a coat hanger, hat space, umbrella stand and over-shoe shelf. Strongly built of welded furniture steel. Beautifully finished in baked enamel.

(Above) No. 3U. 4'3" long, capacity, 12.

No. S-6. Non-tipping costume capacity 6.

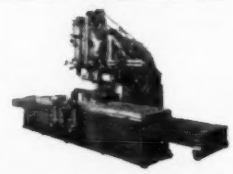
Write for Bulletin OV 8

VOGEL-PETERSON CO.
1121 W. 37th St. • Chicago 9, Ill.

For more details circle NED-97 F8 on enclosed inquiry slip

VIBRATION ?

. . .but not here!



Prevent harmful machine vibration with EMPCO Leveling Jacks and VI-SORB Mounting Pads

JACKS IN SIX STYLES, 25 MODELS. PADS TO FIT.

To avoid excessive machine vibration, *set* them level, *keep* them level, with EMPCO Leveling Jacks! Easy to install, EMPCO Jacks provide a solid, easily adjustable foundation for machine tools, large surface plates, automation lines, tool room and production equipment of all types. Used with VI-SORB Mounting Pads, they further reduce objectionable vibration, retard creepage and often eliminate the need for anchor bolts.

INQUIRE TODAY ASK FOR BULLETIN NO. 100

EMPCO LEVELING JACKS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

Manufacturers of Automatic Production Machines, Fixtures, Machine Parts

For more details circle NED-98 F8 on enclosed inquiry slip

Armite
LED-PLATE
ANTI-SEIZE SEALING COMPOUND

The Thread Lubricant and Sealant for PIPE ★ BOLTS ★ STUDS

For threaded fittings YOU can't beat LED-PLATE.

Try it for assembly, maintenance or production.

A REAL THREAD SEALER
Pressures held to 50,000 psi hydraulic fluids, 3500 psi air, 1000 psi gases. Use for: hydraulic fluids, gases, steam, ammonia, air, acids, fuels, water, etc.

NO HEAT FREEZE
Temperature range: minus 350° to plus 2987° F.

NO CORROSION WELD
Prevents rusting, acid-etch and corrosion.

NO GALLING OR SEIZING
Recommended for aluminum, stainless, titanium, plastic, steel, brass, etc.

EASY ASSEMBLY-DISASSEMBLY
Fast, easy, anytime. Low torque. No seize.

GOVERNMENT SPECIFICATIONS
met as an anti-seize for high temperatures.

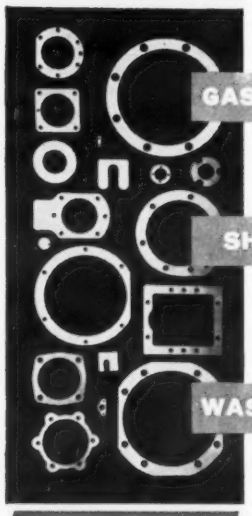
Approved for:
Butane
Propane
Gasoline
Petroleum oils

Send for YOUR FREE SAMPLE

ARMITE LABORATORIES
6609 BROAD STREET
LOS ANGELES 1, CALIF., U.S.A.

For more details circle NED-99 F8 on enclosed inquiry slip

No Order TOO SMALL... or TOO BIG!



With more than 50 years' accumulation of dies, chances are we can furnish the gaskets, shims, or washers you need *. . . without a die charge.* This can cut your cost and speed delivery—whether you need just a few items or large quantities. Gaskets, shims, washers or special stampings are available in metallic, non-metallic and plastics to meet your production requirements.

NOW...WIL-PAK PLASTIC SHIM STOCK with thickness identified by color and gauge number. Write for Bulletin No. 570.

Write for Catalog and prices

CHICAGO-WILCOX Mfg. Co.
7713 South Avalon Avenue
Chicago 19, Illinois

For more details circle **NBD-100 F8** on enclosed inquiry slip

AIR-OPERATED STAPLER
seals filled corrugated containers

Single adjustment clinch control on the wide-crown Model D14AD air-operated stapler changes the staple penetration depth and automatically regulates tightness of the clinch. Eight knob positions control closure from a full clinch to a shallow blind clinch. The air-driven, 3-lb 14-oz, portable tool operates on a maximum of 90 psi. Penetrating type clinchers are interchangeable, left and right. Staples used are 1¼ in. wide, ⅝ or ¾ in. long, and are made of 0.040 x 0.090-in. or 0.074 x 0.037-in. wire. Made by **Bostitch**, 2001 Briggs Dr., East Greenwich, R. I.

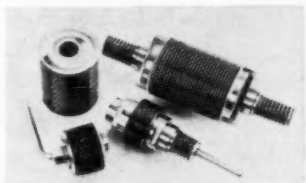
For more details circle **NED-103 F8** on enclosed inquiry slip

FOLDING HANDLE
for electrical chassis and panels

Folding in only one direction, this No. 1900 chassis and panel handle can thus be used for lifting purposes. Handle has spring loaded detents which position the grip in both upright and horizontal planes. It is available in polished nickel plate or black oxide, with brass grip and mounting studs. Handle measures 4⅝ in. long and 1 13/16 in. deep. Made by **Cambridge Thermionic Corp.**, 472 Concord Ave., Cambridge 38, Mass.

For more details circle **NED-104 F8** on enclosed inquiry slip

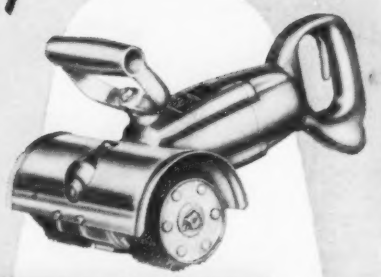
WELDED METAL BELLOWS
in ¼ to 18-in. OD sizes



Sizes ranging from ¼ to 18 in. OD are provided in Formweld welded metal bellows which are custom-engineered in a variety of metals. Applications include aircraft and missile instrumentation, fuel controls, shaft seals, oxygen regulators, steam traps, valve seals, temperature and pressure sensors, nuclear reactors, and other instrumentation. Bellows can be designed with flat, spherical, stepped, and other specially-shaped plates as thin as 0.003 in. Resistance to corrosion, fatigue, salt spray, steam, and other environments involving high pressures and temperature extremes can be designed into these assemblies. Made by **Robertshaw-Fulton Controls Co.**, Bridgeport Thermostat Div., 155 Hill St., Milford, Conn.

For more details circle **NED-105 F8** on enclosed inquiry slip

Chip Away



SCALE RUST PAINT

AURAND CLEANING TOOLS
ELECTRIC OR PNEUMATIC MODELS

Surfaces are cleaned quickly with AURAND on the job. Hardened steel cutters zip away stubborn accumulations from iron, steel, brick, concrete. Adjustable depth shoe protects surface . . . assures uniform cleaning. No special skill required. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write for complete details

AURAND MFG. & EQUIPMENT CO.
1322 Ellis St., Cincinnati 23, Ohio

For more details circle **NED-106 F8** on enclosed inquiry slip

Rapistan

REMOVES the KING-PIN
To give better load distribution

NEW!
3100 Series gives you all these benefits

Longer Life—new design already has demonstrated notable performance superiority over other single ball race casters.
Easier Swiveling—no binding . . . no metal-to-metal friction, because there is NO king pin!
Better Load Distribution—more dependable service, because the hardened swivel bearing raceway supports the load. Resists ball indentation.
Simplifies Your Caster Problems—serves scores of general duty applications up to 500 lbs. capacity. Available with six wheel sizes ranging from 2½" to 6" diameter.

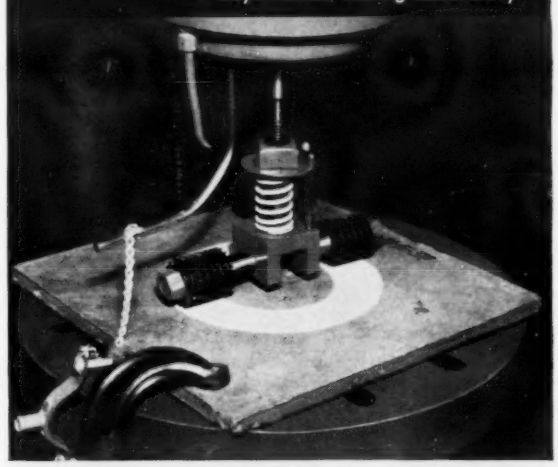
Write for 3100 Series Bulletin

Rapistan fastest growing name in casters

The RAPIDS-STANDARD CO.
INCORPORATED
443 Rapistan Bldg.
Grand Rapids 2, Michigan

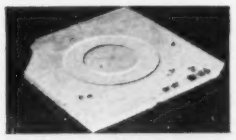
For more details circle **NED-101 F8** on enclosed inquiry slip

"WE MADE THE TESTS"
—Says Herron Testing Laboratory

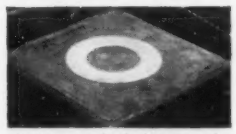


ACRONITE B&B®
for Floor and Structural Maintenance

Makes Concrete 4 TIMES MORE WEAR RESISTANT



1. Unretouched photograph of ordinary concrete



2. Unretouched photograph of Acronite concrete

"ACRONITE Concrete will really take a beating. We saw the results. Acronite B & B will make concrete four times more wear resistant"
—Herron Testing Laboratory

Acronite B&B is the new amazing plastic dispersant that replaces the water in concrete mixes.

Now repair or resurface all types of floors or masonry structures. Apply ¼ inch thick to a feather edge. Floors are ready for traffic in 8 to 12 hours. Resists water, oil, gasoline, lactic acid, acetic acid and beer.

4 times more wear resistance
7 times more load bearing strength
4 times more resistant to sag

Use Acronite B&B to bond new concrete to old concrete or other surfaces.

2 times more bonding strength

If you have a problem of floor or structural maintenance, write to Dept. NED
ACORN PAINT & CHEMICAL COMPANY
8001 Franklin Blvd., Cleveland 2, Ohio

DURABLE
SELF CURING
WATERPROOF
CHEMICAL PROOF
OIL PROOF
NON-SHRINKING
QUICK SETTING
SELF BONDING
PERMANENT
LESS LABOR

ACRONITE B&B
CONCRETE BOND & BINDER
(Patent Pending)

For more details circle **NED-107 F8** on enclosed inquiry slip

THE NEW MILLER ALL-IN-ONE SPOT WELDER for ALL NUMBER ONE WELDS

LECTRO SPOT

Built-in Timer Turns the Trick

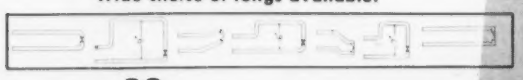
Sheet metal shops ready for new speed, economy and completely uniform spot welds will want the new Lectro Spot. Here's why:

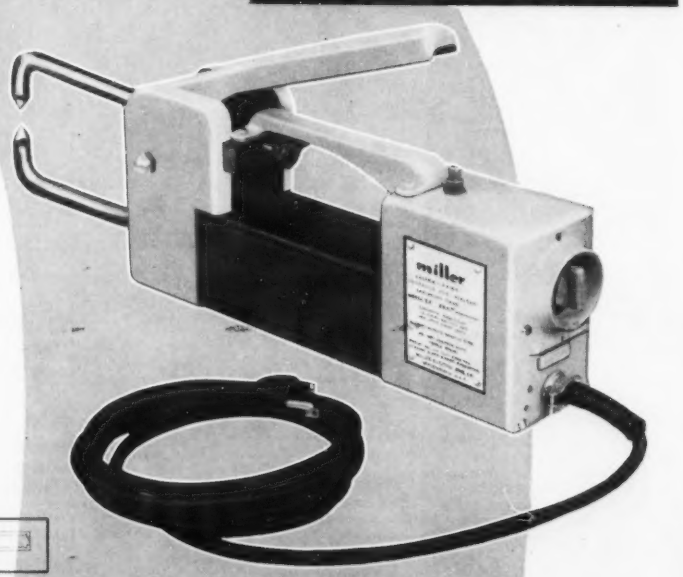
Operator depresses lever and,
1 — 2 — 3:
Tongs grip work at pre-set pressure;
Starter switch is actuated;
Weld sequence starts and stops automatically;
Result: EVERY WELD IS IDENTICAL!

Pressure adjustment and electronic timer controls instantly accessible.

Three models in 115 or 230 volts weld mild steel of 1/8" to 3/16" combined thickness; 1.5 KVA weighs 29 lbs., 2.5 KVA weighs 39 lbs.

Wide choice of tongs available.





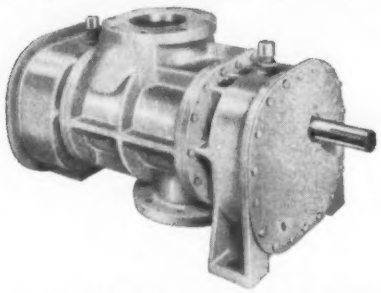
Complete information sent promptly.

miller ELECTRIC MANUFACTURING COMPANY, INC. Appleton • Wisconsin

Distributed in Canada by Canadian Liquid Air Co., Ltd., Montreal

For more details circle **NED-102 F8** on enclosed inquiry slip

new Hoffman Cycloblower meets today's tough service demands



In keeping with U.S.Hoffman's policy of anticipating industry's needs, the Cycloblower, a new axial flow positive displacement blower or exhauster has been added to the company's equipment line.

The Cycloblower operates on the principle of interruption of rotor seal continuity and offers numerous advantages over other blowers and exhausters including:

- **Elimination of runout or trapped pocket effect**
- **Clean air or gas delivery**
- **Efficient shock-free compression**
- **High capacity-low unit weight**
- **Installation flexibility**
- **Efficient, dependable operation**

Write for a free survey of your blower—exhauster needs or Cycloblower Catalogue CB 157

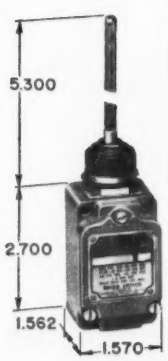
U.S. HOFFMAN MACHINERY CORP.
103 FOURTH AVENUE, NEW YORK 3, N. Y.

For more details circle **NED-108 F8** on enclosed inquiry slip

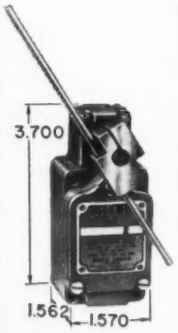
MICRO SWITCH Precision Switches

Six actuator designs available in these "LS" Limit Switches

In this small, two-circuit "LS" series there are six actuator designs. All rotary actuators are field adjustable to operate in clockwise direction, counter-clockwise, and in both directions—with operation point adjustable to any position through 360 degrees. Ample (30°) overtravel is provided in either direction. Their heads can be faced in any of four positions.



Can be operated from any direction. Useful in foundry, conveyor and packaging operations.



Extremely low force characteristics. Rod adjustable to any length. Operating point and direction are adjustable.

Roller lever arm length is adjustable in a 2½ inch range. Head assembly can be positioned to any of 4 sides of switch.

Push plunger actuator for use where the switch plunger motion is in line with the actuating device.

Heavy duty forged aluminum arm actuator with roller. Designed for cam and slide operation. Field adjustable.

Actuator head can be rotated 90° for operation by cams whose approach is perpendicular to the mounting surface of the switch.

For details, ask for Data Sheet 138 and Catalog 83.

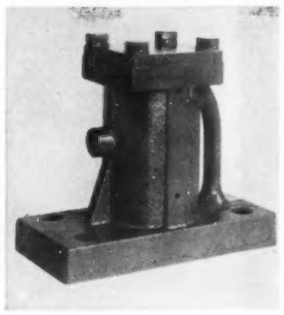
MICRO SWITCH...FREEPORT, ILLINOIS
A division of Honeywell
In Canada: Leaside, Toronto 17, Ontario

The two-word name MICRO SWITCH is NOT a generic term. It is the name of a division of Honeywell.

Honeywell
MICRO SWITCH PRECISION SWITCHES

For more details circle **NED-109 F8** on enclosed inquiry slip

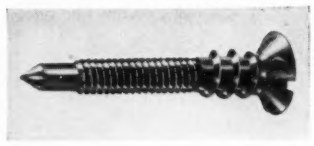
BIN & HOPPER VIBRATORS made in five piston sizes



One-piece design of Navco Binmaster air operated bin and hopper vibrators requires no body assembly bolts or housing springs, and it is equipped with an integral striking plate that cannot separate or leak. They can be used in hazardous atmospheres, extreme moisture, inclement weather, and magnetic dust locations. Five piston sizes from 1¼ to 4 in. are made for bin, hopper, chute, railroad car, and batching applications. Made by **National Air Vibrator Co.**, Dept. N, 2372 W. Seventh St., Cleveland 13, Ohio.

For more details circle **NED-110 F8** on enclosed inquiry slip

MOUNTING SCREW eliminates need for retaining nuts

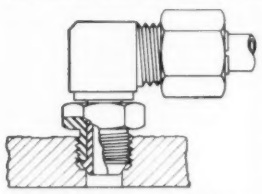


Two types of threads, "nibs" under the head, and a special point are incorporated in the design of this mounting screw, especially suitable for mounting electrical equipment onto panels. The lefthand threads and the nibs allow it to be driven into a panel and retain itself. The standard right-hand machine screw threads form a stud on which component is mounted and secured with a nut. Screw works well in plywood, Masonite, composition board, and other materials. Any standard head style is available, and size and length can be varied. Made by **Illinois Tool Works**, Shakeproof Div., 2503 N. Keeler Ave., Chicago 39, Ill.

For more details circle **NED-111 F8** on enclosed inquiry slip

HYDRAULIC PORT FITTING allows close setting of connection

Close setting of high-pressure hydraulic connections at panel, cylinders, pumps, and manifolds is feasible with this straight-thread hydraulic port fitting. Two ½-in. fittings can be located on 1-in. centers with adequate clearance for assembly. Fitting consists of a swivel body and a floating threaded nut which turns freely on the body stem. Nut is inserted in a threaded port and, as it is turned, bears against a step on the bottom of the stem. Further tightening of nut forces conical end of stem against bottom of hole, forming a pressure-tight metal-to-metal seal. Sizes from ¼ to 2 in. OD are available. Made by **Flodar Corp.**, Dept. ND, 16911 St. Clair Ave., Cleveland 10, Ohio.



For more details circle **NED-112 F8** on enclosed inquiry slip

MIGHTY MIDGETS

...that SAVE SPACE and WEIGHT when You AUTOMATE!

You are sure to find these miniature but MIGHTY pneumatic cylinders, valves and accessories most useful for automatic work and control applications, especially where savings of weight and space are a MUST!

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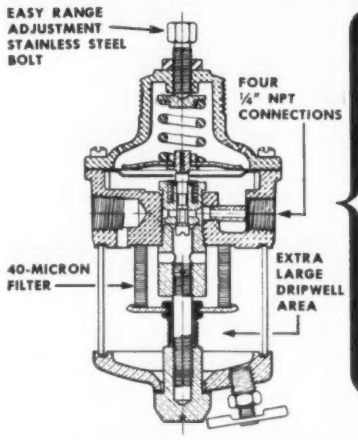

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Insures a dependable source of filtered, regulated air for use with pneumatic controllers and other equipment. Provides highly accurate pressure regulation, regardless of wide variations in flow and upstream pressures. Made of chemically treated corrosion-resistant aluminum and stainless steel. Filter medium quickly cleaned by loosening only one bolt. Your best buy for easy installation and maintenance, rugged service, long life. Available in a variety of ranges and dripwell capacities.

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CC718

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SUBSIDIARY OF WALWORTH COMPANY
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If it's a bellows Bridgeport makes it

Whatever your bellows needs, if the job can be done, Bridgeport can do it. The reason is very simple: Bridgeport hydraulically forms seamless metal bellows to meet exact requirements in dimensional limits and physical characteristics. Bridgeport produces bellows in brass, phosphor bronze, beryllium copper, monel, stainless steel or other metals . . . in sizes from ¼" O.D. up. Let Bridgeport save you money by engineering, producing, testing and delivering *complete* bellows assemblies from *one* source. Send for Bulletin E-106

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BRIDGEPORT THERMOSTAT DIVISION • Milford, Conn.

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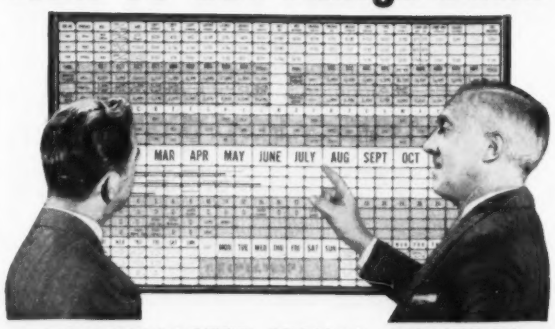

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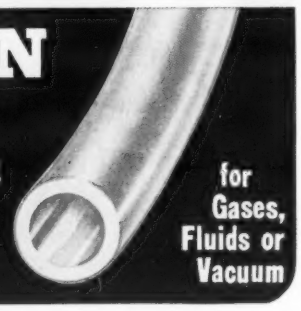
TYGON Flexible Plastic TUBING



for Gases, Fluids or Vacuum

For liquids, gases or semi-solids — corrosive solutions — full vacuums or pressures to 300 psi., Tygon* Tubings handle the job better.

Tygon Tubing is light weight and flexible, easier to handle. It is tasteless, odorless, non-toxic and non-contaminating — safe for foods and beverages. It is resistant to acids, alkalies, oils, water and alcohol. The highly polished bore permits faster flow rates and simple flush cleaning. It may be steam sterilized.

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*T.M. Registered

202-E PLASTICS AND SYNTHETICS DIVISION

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U. S. STONEWARE
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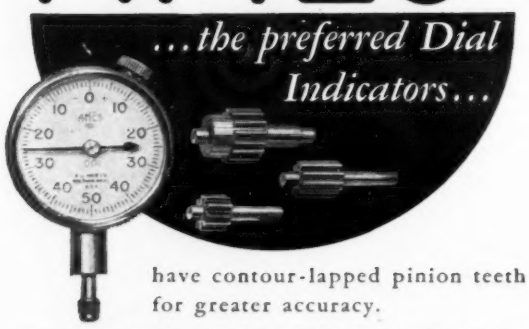

have contour-lapped pinion teeth for greater accuracy.

Because tooth form determines how well pinions mesh — Ames hardens, contour laps, and carefully inspects pinions for perfect tooth form and finish. The result: Pinions that mesh perfectly and a complete absence of "play". This extra attention to detail is typical of the Ames manufacturing approach. It helps explain why so many companies specify Ames Dial Indicators as "preferred". Write today for complete information.

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B.C. AMES CO.
34 Ames Street, Waltham 54, Mass.

MANUFACTURERS OF MICROMETER DIAL GAUGES • MICROMETER DIAL INDICATORS

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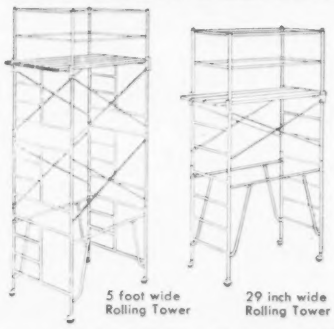
WACO ROLLING MAINTENANCE TOWERS SAFE, MOBILE, ECONOMICAL



WACO ROLLING TOWERS, with either a 29 inch or the 5 foot wide base, easily handle those "off the floor" jobs of maintenance, painting, cleaning or new installation. Waco's exclusive "Speedlock" saves you money too, by cutting the time involved in erecting and dismantling these units.

WACO ROLLING TOWERS are available in multiples of five foot heights with built-in ladders. Waco rolling towers move on heavy duty free wheeling casters with an easy locking brake.

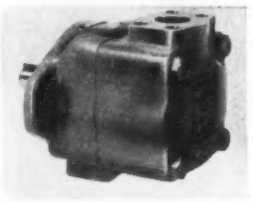
WACO ROLLING TOWERS can also be fitted with straddle braces in place of cross braces, allowing fixed objects to be straddled or providing free passageway for traffic.

For more information on Waco Rolling Towers send for Waco's FREE Scaffolding Catalogue, or check yellow pages of your phone directory for your nearest Waco distributor.

WACO MANUFACTURING CO.
5251 W. 130th Street
Cleveland 30, Ohio

▲ For more details circle NED-119 F8 on enclosed inquiry slip ▲

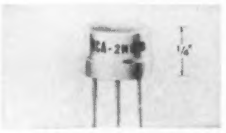
HYDRAULIC PUMP
delivers 12, 14, or 17 gpm



First model of a series of high performance hydraulic pumps will deliver 12, 14, or 17 gpm from the same package size, at 100 psi and 1200 rpm. This provides user outputs of 17.8, 20.4, and 25.2 gpm respectively at 2000 psi and 2000 rpm. Over-all envelope size is 4⅝ x 5¾ x 5⅜ in., shaft extension included. Having vane type construction, pump features complete hydraulic balance to minimize bearing loads. Cartridge is replaceable, and pumping assembly can be replaced without removing pump from its mountings. Made by **Vickers, Inc.**, 1456 Oakman Blvd., Detroit 32, Mich.

▲ For more details circle NED-120 F8 on enclosed inquiry slip ▲

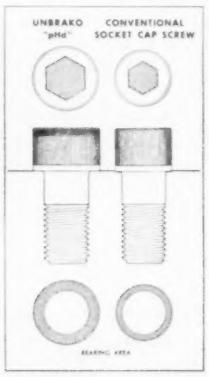
JUNCTION TRANSISTORS
for high current switching uses



Military and industrial computers and other on-off control circuits are applications for three junction transistors of the germanium p-n-p alloy type. The 2N578, 2N579, and 2N580 high switching current units feature a high maximum collector current rating of −400 amp. They have minimum alpha cutoff frequencies of 3, 5, and 10 mc, respectively, and minimum direct current transfer ratios of 10, 20, and 30 at the full collector current rating. All three types are hermetically sealed in a metal case and have a 0.260-in. length (excluding leads) and a 0.370-in. diameter. Made by **Radio Corp. of America**, Semiconductor Div., Somerville, N. J.

▲ For more details circle NED-121 F8 on enclosed inquiry slip ▲

SOCKET HEAD CAP SCREWS
large heads carry heavy loads



Increase in head diameters of Unbrako pHd socket head cap screws enables them to carry significantly larger loads. Maximum increase of only 17 per cent in the larger sizes permits the screws to carry 2⅓ times as much load before indenting the material being fastened. In tension bolting, the higher loading and higher initial permissible tightening means greater clamping force and longer life under live loads. The cap screws with large heads are made in 5/16 to 1-in. body diameters. Head diameters hold the bearing stress to 80 per cent of the axial tensile load on the screw. Made by **Standard Pressed Steel Co.**, Box 581, Jenkintown, Pa.

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Viking

• THE ORIGINAL COMPOUND SHEAR

IMMEDIATE DELIVERY $34.00

VIKING SHEAR COMPANY
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2548

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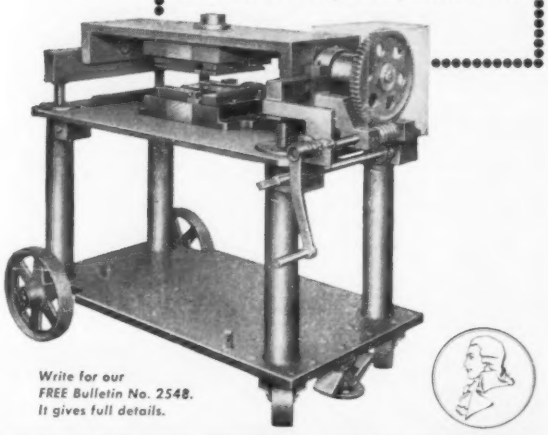
will speed your work and ease your "handling."
Top plate raises and lowers for fitting operations and rotates 360° to give easy access to die.



Write for our FREE Bulletin No. 2548. It gives full details.

THE HAMILTON TOOL COMPANY • 901 HANOVER STREET
HAMILTON • OHIO • U. S. A.

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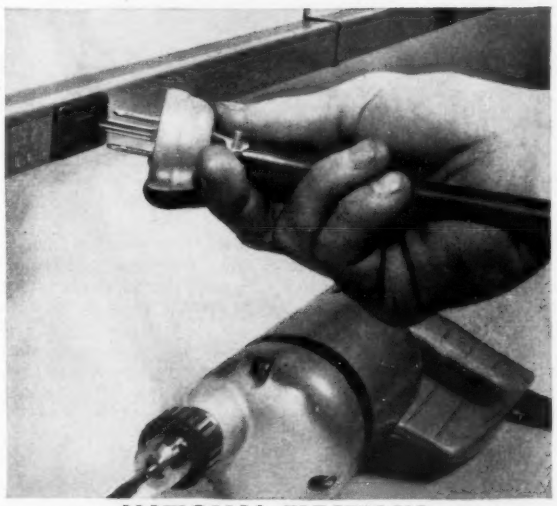
FOR GROUNDED Equipment



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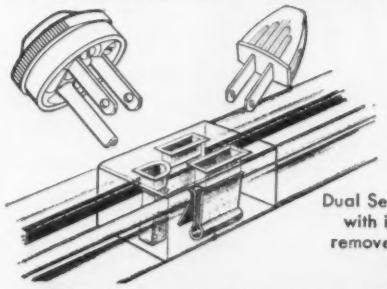
GROUNDING "PLUG-IN" STRIP
(Type CF2-G)

- The easiest and quickest way to provide receptacles for grounding portable equipment!
- Actually two electrical wiring systems in one! Permits the use of grounded or ungrounded devices *from the same outlet.* Will take either the standard Series 5200 3-blade grounding plug or the standard 2-blade ungrounded plug.
- A dual-purpose, metal-clad, multi-outlet assembly providing a convenient spread of outlets every 6" or 18". Plug in equipment anywhere along the strip.
- Unlimited applications in factories . . . offices . . . stores . . . homes . . . hotels . . . schools . . . institutions.
- Listed by Underwriters' Laboratories, Inc. Installation provides continuous grounding circuit.



Dual Service Receptacle with insulator barriers removed for illustration

National Electric Products
PITTSBURGH, PA.
4 Plants • 12 Warehouses • 41 Sales Offices
In Canada, Nepco of Canada, Ltd.

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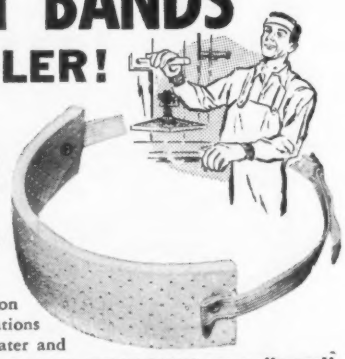
our NEW AIRCOOL SWEAT BANDS are COOLER! Longer Lasting!



PULMOSAN AIRCOOL —the only sweat band made of perforated pure foam rubber, reinforced with a cotton backing. The perforations aid evaporation of water and circulation of air . . . AIRCOOL SWEAT BANDS are really *cool!* Elastic headbands are easily adjustable with 4-slot slide. Foam rubber body is durable, tear resistant, soft, resilient. *Packaged 25 per box.* 16¢ each. 1,000 or more, 14¢.

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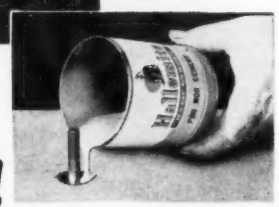
Fast Setting Cement



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Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

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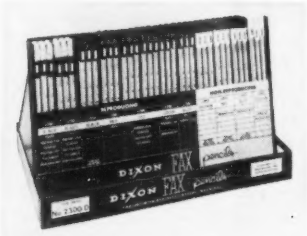

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shapes various granular materials

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For more details circle NED-131 F8 on enclosed inquiry slip

Selecting the Right Hoist

American Engineering Co.—"How to Select the Proper Hoist to Meet Your Needs" is title of 8-page catalog section dealing with design, performance, and use of electric wire rope hoists. All factors relating to application are discussed.

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TITLE_____
COMPANY_____
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LOOK! Here's how SpiroLox RETAINING RINGS Save You Time—Effort—Money!

✓ Save you hours of machining—hours of assembly time! Easy in—easy out.
✓ Save you extra lock parts!
✓ Save you space—insures neater assemblies!
✓ Save you dead weight.

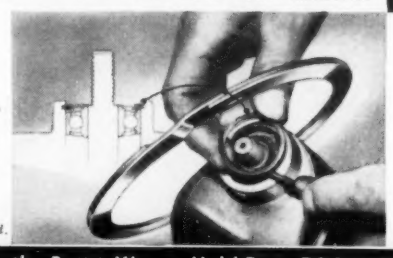
Spirolox has solved hundreds of industry's retaining problems, just like the #612 Drill shown below. Unique, 2-turn construction actually "friction locks" Spirolox into groove. No more keys, pins, collars. Assembly was completed quicker, easier; is more compact, neater, lighter. And Spirolox *always* provides a uniform shoulder.

SEND FOR FREE TEST SAMPLES AND DATA BULLETIN

Let us see a blueprint of your retaining problem.

Ramsay Corporation, a subsidiary of Thompson Products, Dept. F, St. Louis 8, Mo.

U.S. Pat. No. 2,450,425 and Foreign Pats. Other pats. pend.



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SPIROLOX—the Better Way to Hold Parts TOGETHER!

For more details circle NED-134 F8 on enclosed inquiry slip

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BLACK BEAUTY

BLAST GRIT

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- Longer lasting, reusable many times over.
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- Gives highest degree of etch for better bonding.

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Efficient Sta-Warm melting tanks are made to your size and shape specifications. Specially designed heating element applied to tank sidewall and bottom areas avoids burning of contents or lumpiness.

Heated valve, or heated flexible hose with heated dispensing nozzle, can be supplied.

If you melt or dispense heated compounds, write for illustrated catalog today. No obligation.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO
Subsidiary of ABRASIVE & METAL PRODUCTS CO.

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FEATURES

- Tough, electronically welded seams and buttons—garments last two to five times as long
- Flexible—allow full freedom of movement
- Gloves withstand chemicals, solvents, are abrasion resistant and flexible

North PVC clothing and gloves are famous the world over for long wear, comfort, and the extra protection they afford against industrial hazards and weather. Every North PVC garment has superior details of construction not ordinarily found in products of this type.

The complete North PVC line includes industrial gloves, aprons, rainwear, and a wide range of protective clothing of all types. Write today for free literature and complete information.

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Dept. G, Philadelphia 38, Pa.
Associated companies and distributors throughout the world

▲ For more details circle NED-137 F8 on enclosed inquiry slip ▲

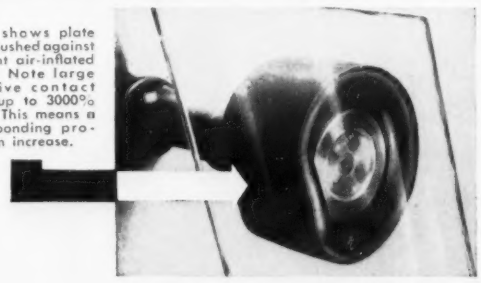


Photo shows plate glass pushed against resilient air-inflated wheel. Note large abrasive contact area—up to 3000% more! This means a corresponding production increase.

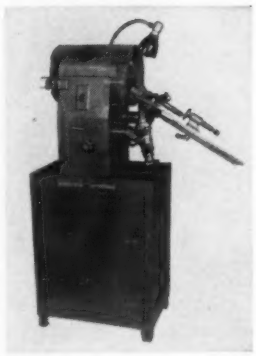
...how to INCREASE BUFFING, POLISHING PRODUCTION 3000%

● You can boost your buffing and polishing output up to 3000% on flat work . . . and 600 to 700% on contours . . . by using this resilient air-inflated wheel. Many other advantages such as—*no chatter or bounce . . . eliminates under-cuts . . . produces a straight pattern similar to a hand finish.* For use on portable tools or bench-stands—wherever ordinary polishing wheels are used. Send NOW for free literature and name of distributor nearest you.

NU-MATIC GRINDERS, INC.
8224 Carnegie Ave. Cleveland 3, Ohio

▲ For more details circle NED-138 F8 on enclosed inquiry slip ▲

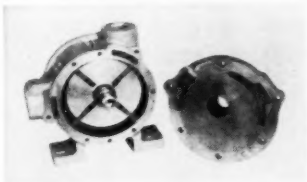
DRILL GRINDER redesigned housing has storage space



Bottom of the redesigned, hammertone-enameled housing for Worcester drill grinders is a roomy cabinet with hinged door, two shelves, and storage space. Top of cabinet forms a rubber-padded work tray. Also added is a Plexiglas safety eyeshield, built-in diamond dresser, work light, push-button switch with overload protection, and a tool rest. A new mist coolant system is optional. Made by **Black Diamond Saw & Machine Works**, 131 North Ave., Natick, Mass.

▲ For more details circle NED-139 F8 on enclosed inquiry slip ▲

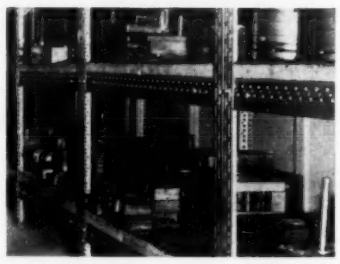
AIR & VACUUM PUMP redesigned to prevent gas leakage



Oil-less rotary air and vacuum pumps now incorporate a rotary shaft seal which prevents leakage of air into pump, or leakage of gas being pumped to the atmosphere. Pump can thus be used for gas sampling, impinging, or any operations where medium must not be contaminated by oil or mixed with atmosphere. Unit delivers from 2 to 12 cfm with vacuums to 20 in. Hg, or pressures to 15 psi. It can be V-belt or close-couple motor driven. Made by **Leiman Bros., Inc.**, 167-A Christie St., Newark 5, N. J.

▲ For more details circle NED-140 F8 on enclosed inquiry slip ▲

STRUCTURAL FRAMING ANGLE for making racks and structures



Engineered slot formation of Handy Angle Royal framing angles provides greater scope in building storage racks, pallet racks, structures, and equipment. Corner rigidity is assured with diagonal two-bolt fixing on the narrow to narrow flange. Slots repeat on a 2-in. pitch, and positive location of holes prevents slipping. Angle is provided in waterproof packs containing eight 12½-ft lengths and 75 sets of nuts, bolts, and washers. It is rust-proofed with aluminum etching primer and finished with polychromatic satin bronze lacquer. Made by **Lug-All Co.**, Handy Angle Div., 355 Lancaster Ave., Haverford 15, Pa.

▲ For more details circle NED-141 F8 on enclosed inquiry slip ▲

The Tool EVERYONE Wants!

No. 1902 Crimping Tool & Bolt Cutter by VACO

Only $3.95 mechanics' net

Mechanics everywhere praise the new No. 1902 for its on-the-job convenience. Not only does it cut and strip wire and crimp terminals for positive, trouble-free connections . . . but it shears all popular size small bolts and machine screws *perfectly!* Just squeeze . . . no de-burring necessary. A perfect job every time.

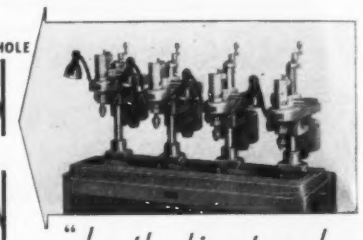
Plastic Service Kit No. 2090 Contains No. 1902 Tool plus 10 popular terminal numbers in FREE plastic compartmented box. $8.90 complete!

Look for the No. 1902 in the Red, White & Blue Display Carton
At Your Jobber or Write To:

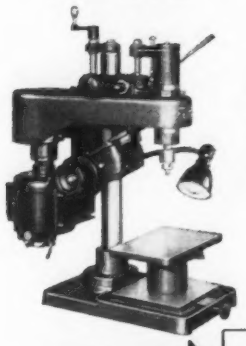
VACO PRODUCTS CO., 317 E. Ontario St., Chicago 11, Ill.
In Canada: Vaco Lynn Products, Ltd., Montreal 1, Que.

▲ For more details circle NED-142 F8 on enclosed inquiry slip ▲

HAMILTON SUPER SENSITIVE, SMALL-HOLE **PRECISION** (REPEAT) **PRECISION** DRILLING MACHINES



"for the finest work you do"



Designed and built to master the heart-breaking jobs which so often are attempted on drilling machines of "standard" accuracy.

WE WILL SUPPLY FULL INFORMATION FREE
ASK FOR BULLETIN NO. 2468

ADDRESS **THE HAMILTON TOOL COMPANY**
901 Hanover Street
HAMILTON, OHIO

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE.
2468

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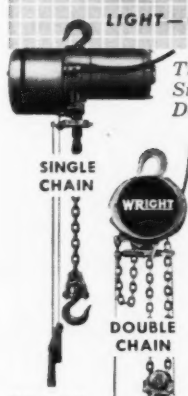
NEW WRIGHT Electric Chain Hoists

LIGHT—COMPACT—RUGGED—LOW COST



Two capacity ranges as pictured—
Single Chain 300 to 2000 lbs.
Double Chain 3000 to 4000 lbs.

Long Life · Safety · Minimum Maintenance are assured by these sound features:—Wick Oiling of Load Chain gives a working life many times greater than dry chain ...Fewest Moving Parts of any chain-type electric hoist cuts maintenance...Alloy Steel Load Chain is heat-treated for long-wearing surface, with ductile core to resist shock loads—side-pull won't break this flexible chain...Load Wheel Hooks and Hook Couplings are drop-forged alloy steel...Worm and Gear Drives serve as simple, positive Load Brake, and there's a big, efficient Motor Brake, easy to adjust for lining wear. For complete information, write York, Pa., for **Bulletin DH-73.**

Wright Hoist Division
AMERICAN CHAIN & CABLE ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

▲ For more details circle NED-144 F8 on enclosed inquiry slip ▲

Angles, radii, holes, surfaces... inspect them *all* with one instrument

Optical gaging with a Kodak Contour Projector lets you inspect critical dimensions on a wide variety of components to close tolerances quickly and economically.

Quickly because you can inspect *at a glance.* It's simply a matter of comparing the magnified projected image of the component with a chart gage on the projector screen.

Economically because you eliminate the need for buying a multitude of gages. With a Kodak Contour Projector, you see at a glance what it takes many gages and gaging operations to tell you.

A Kodak Contour Projector can solve your inspection problems in toolroom . . . receiving . . . production . . . final inspection. To find out more about optical gaging, send for the booklet "Kodak Contour Projectors." Write to:

Apparatus and Optical Division
EASTMAN KODAK COMPANY, Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR

Kodak TRADE MARK

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Transferring Heat?

TRY WOLVERINE TRUFIN®

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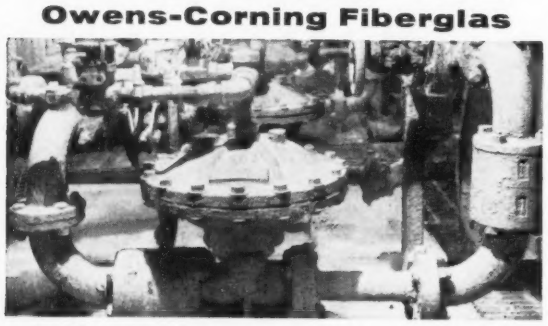
WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17266 Southfield Road
Allen Park, Michigan
Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

For more details circle NED-146 F8 on enclosed inquiry slip

Solved... **Another "Problem Pumping" Job at Owens-Corning Fiberglas**



Handling water base paint and operating 16 to 24 hours per day . . . every day, these Oliver Diaphragm Slurry Pumps installed at the Newark, Ohio plant of the Owens-Corning Fiberglas Corp. are employed to maintain pressure in the paint feed line to spray gun manifolds for the spraying of acoustical tile block.

The Owens-Corning installation is but another example of the ability of Dorr-Oliver Pumps to provide the solution to "problem pumping" applications. With the diaphragm operating pneumatically there is *no stuffing box*, thus *no leakage*. The reliability and low maintenance features inherent in this link-free design can readily be interpreted in terms of reduced operating costs. In addition, the O.D.S. is capable of handling materials ranging from clear liquid to slurries containing up to 60% abrasive solids.

For a free copy of Bulletin No. 5003 covering the Oliver Diaphragm Slurry Pump, write: Dorr-Oliver Incorporated, Stamford, Connecticut.

DORR-OLIVER INCORPORATED
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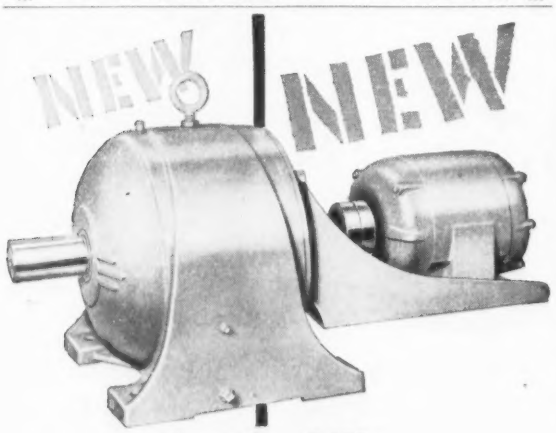
STAMFORD • CONNECTICUT • U.S.A.

For more details circle NED-147 F8 on enclosed inquiry slip



Louis Allis
LINE-A-SPEDE

Louis Allis LINE-A-SPEDE is a motorized gear reducer built to accommodate foot-mounted motors of any speed or enclosure.

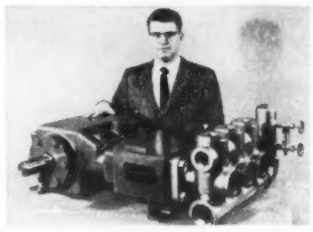
LINE-A-SPEDE is available in ratings from 1 to 75 hp., double and triple reductions with ratios from 5.06 to 230:1, in both foot- and vertical flange-mounted styles. Write to the Louis Allis Company, 436 East Stewart Street, Milwaukee 1, Wisconsin.

LOUIS ALLIS

GM-114

For more details circle NED-148 F8 on enclosed inquiry slip

HORIZONTAL TRIPLEX PUMPS rated up to 2300 barrels per day

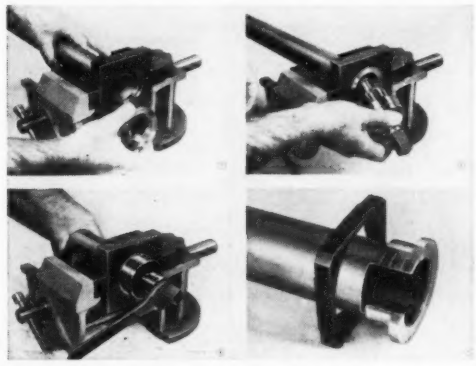


Made of corrosion resistant aluminum bronze or close-grained cast iron, Model KCA horizontal triplex pumps feature interchangeable 1¼-1½ in., 1¾-2 in., and 2¼-2½-in. plungers which give them water and light oil capacities from 572 to 2300 barrels per day, operating at 350 rpm. Maximum pressures range from 3100 to 775 psi, according to plunger size. All models have a 3-in. stroke. Pumps have 3-in. suction and 2-in. discharge on either side. All moving power end parts are lubricated by a combined flood and splash system. Made by **Worthington Corp.**, 427 Worthington Ave., Harrison, N. J.

For more details circle NED-149 F8 on enclosed inquiry slip

TUBE SPINNING TOOLS expand, size, and burnish tubing in one continuous operation

Durable, leakproof joints are produced with Ideal spinning tools which expand, size, and burnish light-wall tubing in one operation. Rigid joints can be made,



even with light wall tubing. Adjustable spacer rings inserted on the mandrel or threaded adjustment collars regulate the degree of expansion and eliminate excessive forward thrust and over-rolling.

When joining light wall tubing to ferrules (Fig. 1) a split die block backs up the ferrule to prevent distortion. Spinning tool is inserted into the tube (Fig. 2) and the mandrel is pushed forward until it engages the expanding tools. The tool is turned clockwise by hand or a reversible air or electric portable drill until the mandrel abuts the adjusting spacer rings (Fig. 3).

Tool is designed for use on straight or bent tube elbows having a 2:1 center line bend radius. Fig. 4 shows one form of groove configuration illustrating ridges raised on the tube surface to hold the ferrule to the tube. Made by **Gustav Wiedeke Co.**, 1833-E Richard St., Dayton 1, Ohio.

For more details circle NED-150 F8 on enclosed inquiry slip

Plastics
EXTRUSIONS by CONNEAUT

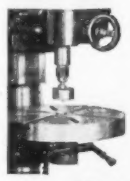
The Conneaut Rubber And Plastics Company is equipped to handle your requirements for almost any cross section in extruded Polyethylene and Vinyls. Where needed, we formulate special compounds in our own laboratories to meet your special applications. Complete die-making facilities in our own plant enable us to obtain extremely close tolerances . . . meet specifications exactly. Send us your blue prints for our quotations . . . or your problem for analysis and recommendations.

SEND FOR FREE, ILLUSTRATED FOLDER

Contains complete details on Conneaut's custom service on plastics compounding and extruding. 102-D

THE CONNEAUT RUBBER AND PLASTICS COMPANY
CONNEAUT, OHIO

For more details circle NED-151 F8 on enclosed inquiry slip



Saw Large Holes thru sheet or plate

MARVEL High-Speed-Edge Hole Saws (with high-speed-steel cutting edge integrally welded to tough alloy steel body) provide fast, economical means of sawing out holes from 9/16" to 6" diameter through steel up to 1⅛" thickness. Extra cutting quality and high-speed-steel, self-aligning, double drive pin arbors give strength for use on drill presses, lathes and portable tools, greatly increase the hole size capacity of small tools. Last longer and cut faster with safety.

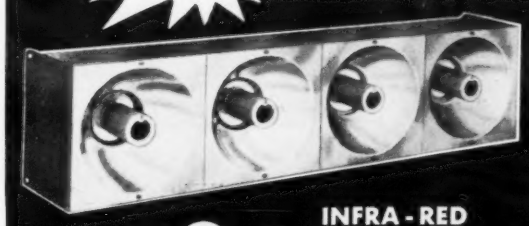
Write for Hole Saw Catalog Sheets.

MARVEL *Metal Cutting* **SAWS**
Better Machine-Better Saws

ARMSTRONG-BLUM MFG. CO.
"The Hack Saw People"
5700 Bloomingdale Ave. Chicago 39, U.S.A.

For more details circle NED-152 F8 on enclosed inquiry slip

NO BULBS OR SOCKETS TO BURN OUT!
NO COLD OR HOT SPOTS



with **driQuik** **INFRA-RED INTERLOCKING OVEN SECTIONS**

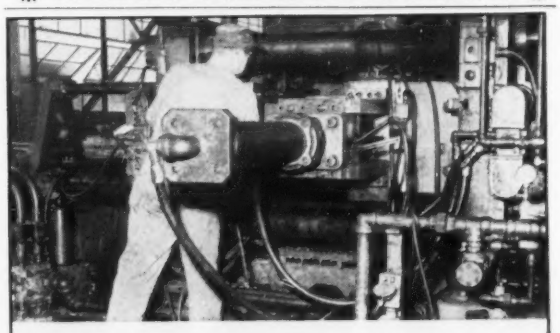
ovens any size or shape

There's nothing anywhere like the driQuik infra-red generators which are lava coated and deliver far more infra-red rays with less power consumption than any other method known. They not only cut down replacement cost; they're immune to shocks, vibration, moisture.

WRITE TODAY FOR LITERATURE
showing how you can speed up production and reduce costs by building or having us build driQuik ovens for your needs.

driQuik DIVISION
DRY CLIME LAMP CORP.
GREENSBURG, INDIANA

For more details circle NED-153 F8 on enclosed inquiry slip



Aeroquip Hose Lines Withstand Heat, Soaking, Shock and Abrasion
ON 1000-TON DIE CASTING MACHINES

Basic Aluminum Castings Company of Cleveland, Ohio, reports no hose failures with Aeroquip Hose and Fittings. Dependable operation for more than four years has proved the reliability of Aeroquip 1509 Hose and Reusable Fittings. Used on high pressure hydraulic lines, this hose is exposed to high surge pressures, ambient heat, abrasion, external water and oil 18 to 24 hours daily. Aeroquip offers hose types for pressures up to 5000 psi. compatible with all kinds of hydraulic fluids. Call the Aeroquip distributor listed in your Yellow Page Phone Book, or write us for complete information.

Aeroquip

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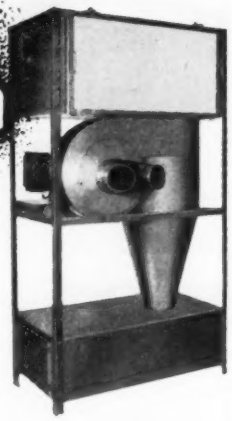
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN CANADA, U.S.A. & ABROAD

For more details circle NED-154 F8 on enclosed inquiry slip

EFFICIENT–LOW COST

Dust Collection



Easy installation . . . efficient low-cost operation . . . simplified maintenance, make Dustkop *FIRST* among equipment to collect most all industrial dusts. There are Dustkop models to eliminate your dust problems . . . that are space saving, self-contained units, or exhaust type for rafter, ceiling or outside location. Write for descriptive literature.

DUSTKOP STOPS DUST

37 STANDARD MODELS TO CHOOSE FROM

• READY TO USE

Also a Complete Line of Mist Collectors

AGET MANUFACTURING COMPANY
1396 E. CHURCH ST. • ADRIAN, MICHIGAN

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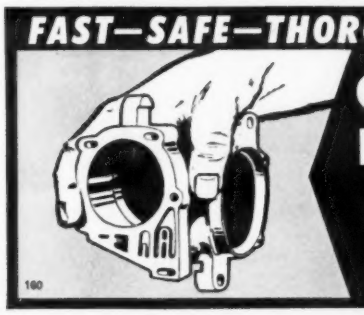
FAST—SAFE—THORO WAY TO CLEAN PARTS LIKE THIS



Flush oil and chips from blind holes and cavities with filtered solvents in the

NEW, LOW COST GRAYMILLS CLEAN-O-MATIC PARTS WASHER

For production and maintenance cleaning of dies and individual parts and assemblies.

- **No heating—no vapor—no rusting**
- **Jet Nozzle, Flood Nozzle, Agitated Soak Tank**
- **Automatic Safety Cover**
- **Abrasive Proof Pump**

Send for new, complete catalog and prices today.

GRAYMILLS CORPORATION
3717 No. Lincoln Ave., Chicago 13, Illinois

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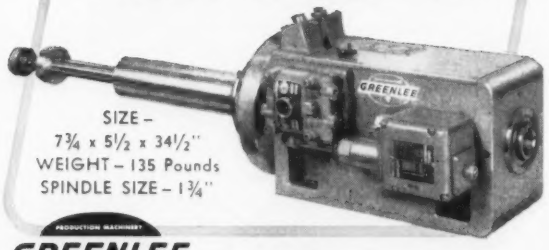
CLOSE TOLERANCE BORING AT LOW COST



SIZE – 7¾ x 5½ x 34½"
WEIGHT – 135 Pounds
SPINDLE SIZE – 1¾"

GREENLEE Model S-7 HYDRO-BORER*

*Patented

Extremely Accurate . . . Easy To Set Up

You too can have close tolerance boring in assembly with the Greenlee S-7 Hydro-Borer! Greenlee's patented feed principle assures extreme accuracy and smoothness of finish . . . performance that is unmatched in the S-7's field. Compact . . . easily tooled. Write today for further information! Ask for Bulletin HB706.

GREENLEE BROS. & CO.
2246 MASON AVENUE
Rockford, Illinois

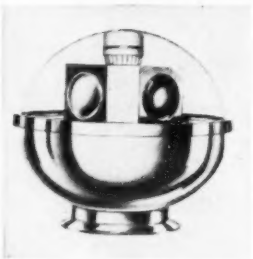
▲ For more details circle NED-157 F8 on enclosed inquiry slip ▲

MINIATURE GAS TURBINE offered in 5 and 10-hp ratings

Weighing only 30 lb, the compact Turbo - Mite miniature gas turbine can be used to drive an auxiliary power unit, portable pump, a pneumatic source, or portable ground power source. It delivers either 5 or 10 hp and can be supplied to furnish 400-cycle ac power or dc power. As a pump, it can be used with airborne fire fighting equipment, as a bilge pump, or as a fuel transfer pump. In pneumatic applications, unit provides power for air starters, air-conditioning, ventilation for cooling, or heated air for engine warm-up. It operates in 65 to 165° F range and is inaudible at 100 ft. Made by **Propulsion Research Corp.**, Santa Monica, Calif.

▲ For more details circle NED-158 F8 on enclosed inquiry slip ▲

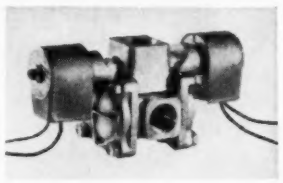
WAREHOUSE FLASHER LIGHT helps solve bird nesting problem



Bird damage to packaged goods, sheet steel, machinery, and other merchandise stocked in warehouses can be minimized with this revolving flasher light. This Roving Ray bird-eliminating light flashes alternate clear and amber beams that disturb the birds, interrupting their feeding and nesting to the extent that they do not remain. Light operates on 115/120 v, is easily installed, and has a 2000-hr bulb. Made by **Trippe Mfg. Co.**, Dept. RR-1, 133 N. Jefferson St., Chicago 6, Ill.

▲ For more details circle NED-159 F8 on enclosed inquiry slip ▲

DUAL SOLENOID VALVE controls hot and cold water inlet



Heavy forged brass body and bonnet and Buna N diaphragms eliminate corrosion problems in the Bulletin 8350 dual solenoid inlet valve, designed for controlling hot and cold water flow. It has two ¾-in. inlet connections and a common 1-in. outlet. The valve closes when the solenoid is de-energized. Dual solenoids may be energized together or separately as required. Pressure range is 5 to 125 psi. Valves operate on alternating (10.5 w) or direct (10 w) current and are offered in most standard voltages. Made by **Automatic Switch Co.**, 52-AA Hanover Rd., Florham Park, N. J.

▲ For more details circle NED-160 F8 on enclosed inquiry slip ▲

Cracked cast iron block . . . repaired the same day with Ni-Rod "55"

When this 150-lb. pulley block cracked, operators had to choose between replacement and repair. Replacement meant delay, so they decided to try repair.

With Ni-Rod* "55" electrode, the job was finished within the day. The strong, sound weld took only 1½ lbs. of Ni-Rod "55" electrode.

Emergency repairs are easier with Ni-Rod "55" electrode. No special equipment. No special training. *Most jobs require no preheat.*

Send for folder, "Repair Cast Iron Parts Quickly and Easily." Gives many examples of successful welding with Ni-Rod "55" electrode. Circle the number below on the NED inquiry slip.

The INTERNATIONAL NICKEL COMPANY, Inc.
67 Wall Street *Registered trademark New York 5, N. Y.

INCO Welding Products
Electrodes • Wires • Fluxes

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★ **Quick Laboratory Service** . . . on your problem markings.
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For Complete Information Phone BAker 5-8201 or write:

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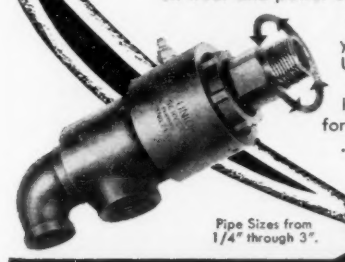
"WHERE *Good Connections* COUNT"® Use the ROTARY UNION*

FOR LONG SERVICE Self-alignment and other features reduce wear . . . FOR TROUBLE FREE SERVICE Mechanical seal and optically flat surfaces automatically form a perfect seal at pressure ranges from 0 to 250 PSI . . . FOR ECONOMICAL SERVICE The Rotary Union requires no adjustments or mechanical maintenance, and ball bearing construction saves on wear and power consumption.



You'll do better when you specify the Rotary Union for any rotating connection . . . for heating or cooling . . . for low or high pressures . . . or for slow or fast operation. Over 40 types and sizes.

Pipe Sizes from 1/4" through 3".

*Trade Name —Patented

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, N.C.
Baltimore—Buffalo—Camden, N. J.—Chicago—Cleveland—Los Angeles
New York—Providence—Hamilton, Ont.—Montreal—Toronto

▲ For more details circle NED-163 F8 on enclosed inquiry slip ▲

STITCH METALS up to 5/16" thick

- Bostitch Metal Stitching cuts assembly time up to 90%.
- Stitcher punches its own hole, inserts staple and clinches it — all in ⅕ second.
- No holes to prepare. No pre-cleaning.
- Needs only a single, semi-skilled operator.
- Find out about the different types of Bostitch metal stitchers—and stitches.

Fasten it better and faster with

Write for Bulletin
BOSTITCH, 686 Briggs Drive
East Greenwich, Rhode Island

BOSTITCH
STAPLERS AND STAPLES

▲ For more details circle NED-164 F8 on enclosed inquiry slip ▲

How to make "off-the-shelf" units do special filtering jobs

Save time, money and headaches by using Purolator standard units to solve your filter problems — no matter how specialized. Wide range of requirements covered!

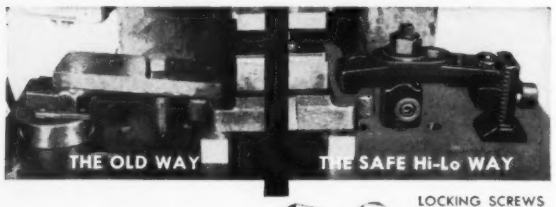
ACIDS	FATS	PAINTS
AIR	FOODS	PASTES
ANTIBIOTICS	FUEL	PETROCHEMICALS
ANTIFREEZE	GASES	PIGMENTS
BEVERAGES	GASOLINE	REFRIGERANTS
CATALYSTS	GREASE	SOLVENTS
COATINGS	HYDRAULICS	SYNTHETICS
CONFECTIONS	INTERMEDIATES	SYRUPS
COOLANTS	LACQUERS	TOOTHPASTE
COSMETICS	LIQUORS	VARNISHES
CUTTING FLUID	MEDICINES	VEHICLES
DETERGENTS	OILS	VITAMINS
ESSENTIAL OILS	OINTMENTS	WATER
		WAXES

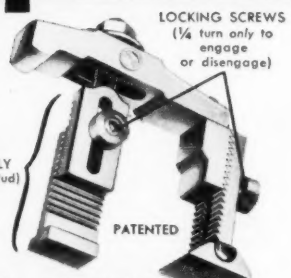
Filtration For Every Known Fluid

PUROLATOR PRODUCTS, INC.
Rahway, New Jersey and Toronto, Ontario, Canada

WRITE for Industrial Filter Catalog, or send schematic drawing and details for specific recommendation. Address Purolator Products, Inc., Rahway, N. J.

For more details circle NED-166 F8 on enclosed inquiry slip





Hi Lo

self-contained... rapid adjustable **CLAMPS**

• Designed to overcome three major clamping problems . . . time consuming . . . bolt stripping waste . . . and unsafe set-ups. • All component parts stay integral—NO LOOSE PIECES • All parts are steel forging, heat treated for maximum toughness • Serrated bolt and step block adjustment design provides rigid, parallel clamping for safe set-ups

Ask about FREE demonstration . . . Hi-Lo Kits . . . and full particulars. Write to:

AVAILABLE: Distributorship in some U.S. areas

Hi-Lo PRODUCTS COMPANY
Div. of Steel City Testing Machines, Inc.
8819 Lyndon Ave., Detroit 38, Mich.

For more details circle NED-167 F8 on enclosed inquiry slip

Gear-O-Mation—For the Best in . . .

AUTOMATED PARTS HANDLING

Gear-O-Mation handles all kinds of parts from precision bearings to bulky castings, from hard-to-handle wire springs to heavy forgings, and from blank to finished gear. G-O-M handling equipment does the job—automatically and economically. If your process requires demand control, selective feeding, active storage or positive movement of any type part—get 'geared' to automation by Gear-O-Mation. They have the 'pre-engineered' equipment that costs you less and works better.

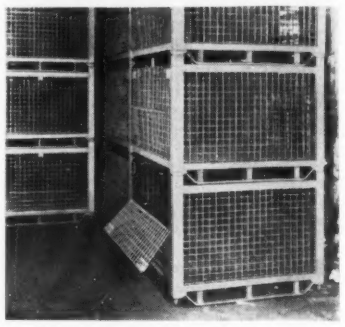
Write for descriptive literature

Washers	Storage Units
Elevators	Distribution Systems
Conveyors	Assembly Devices
Orientors	Demand Feeders

Automation by... GEAR-O-MATION
DIVISION OF MICHIGAN TOOL COMPANY
7171 E. McNICHOLS RD. • DETROIT 12, MICH.

For more details circle NED-168 F8 on enclosed inquiry slip

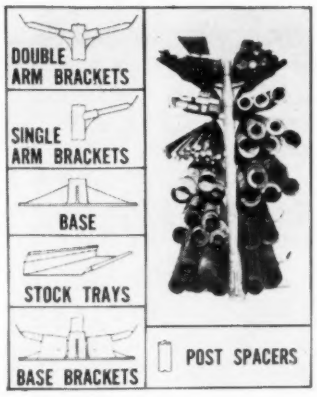
WIRE MESH BINS for handling, storing heavy parts



Heavy parts are easily handled, stored, or shipped in Model 600 Wire-Tainer portable wire mesh bins. They are made in 48 x 53 x 38-in. and 42 x 53 x 38-in. sizes. Unit with smaller width is suitable for either truck or rail shipping. Positive stacking and accessibility to contents are afforded. Made by **Springport Products Co.**, 120 Willow St., Springport, Mich.

For more details circle NED-169 F8 on enclosed inquiry slip

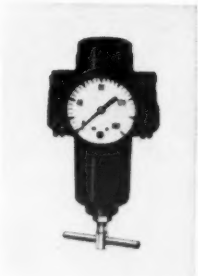
STORAGE RACK SYSTEM stores variety of shapes and sizes



Metal bases, post spacers, arm brackets, and pipe arms are assembled on lengths of either 2, 2½, or 2½-in. extra heavy pipe to form this sectional "build-it-yourself" storage rack system. It keeps various sizes and shapes of bars, rods, pipe, tubing, and shafting readily available. Racks may have either double or single arm and can be easily rearranged to meet changing conditions. Among accessories offered is an adjustable guide for holding stock in line with machine centers. Made by **Brown Engineering Co.**, 129 N. Third St., Reading 2, Pa.

For more details circle NED-170 F8 on enclosed inquiry slip

AIR PRESSURE REGULATOR delivery range is 5 to 125 psi



Constant, uniform working pressure is provided by this air line pressure regulator which has a delivery pressure range of 5 to 125 psi. Equipped with a large valve port, the unit is self-bleeding, permitting instant adjustment of pressure. Entire valve assembly can be removed by hand without tools for cleaning. Regulator can be used with Gits Matched-Set lubricators, filters, and regulators. Made by **Gits Bros. Mfg. Co.**, Pneumatics Div., 1866A S. Kilbourn Ave., Chicago 23, Ill.

For more details circle NED-171 F8 on enclosed inquiry slip

which **IDLER** is **MAINTENANCE FREE**?

(Joy Limberoller Idler) (Conventional 3-roll idler)

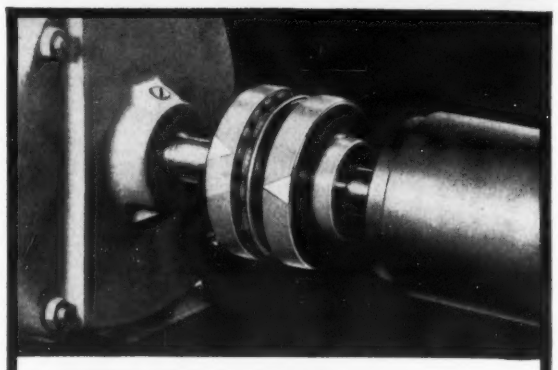
The Limberoller idler on the left is a single roll idler consisting of a series of neoprene discs molded to a flexible steel cable. The idler hangs in a curve between two bearings, one on either side of the belt, up out of the dirt. There are no bearings down under the belt . . . no bearing failures. As the Limberoller idler turns it flexes, keeping itself free of material build-up. The Joy Limberoller Belt Conveyor Idler has completely eliminated idler maintenance at many plants.

WRITE FOR BULLETIN 216-54

JOY MANUFACTURING COMPANY
Oliver Building, Pittsburgh 22, Pa.
In Canada: Joy Manufacturing Company (Canada) Limited, Galt, Ontario

WSW L6960-216

For more details circle NED-172 F8 on enclosed inquiry slip



NEW SURE-FLEX COUPLINGS ABSORB 5 TO 15 TIMES MORE SHOCK, BOOST MOTOR AND MACHINE LIFE

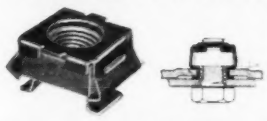
New Sure-Flex Couplings have exceptional torsional flexibility . . . assuring greater absorption of shock and vibration . . . resulting in longer motor and machine life. They withstand all combinations of misalignment and end-float, are simply designed, easily installed and unaffected by abrasives, dirt or moisture. There is no wear, no need for lubrication or maintenance. Write for Bulletin No. 10100.

T. B. WOOD'S SONS COMPANY
CHAMBERSBURG, PENNSYLVANIA
CAMBRIDGE • NEWARK • CLEVELAND • DALLAS • ATLANTA

For more details circle NED-173 F8 on enclosed inquiry slip

TINNERMAN **SPEED GRIP**® NUT RETAINERS

THE MOST ADVANCED METHOD

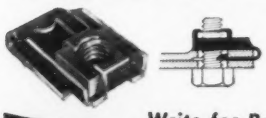


STANDARD — Eliminate welding, clinching, staking, hole misalignment and paint clogging! SPEED GRIPS are easily attached by hand. "Mechanical hands" hold nut in bolt-receiving position.

OF ATTACHING SQUARE NUTS

SELF-ANCHORING — Contains a special locking feature for permanent retention. High-torque holding power. Rattle-proof, cannot be dislodged even with abusive handling.

TO SHEET METAL PANELS . . .



"J" TYPE — Snaps over panel edges by hand; ideal for blind locations. Self-retained in bolt-receiving position. Extrusion in retaining leg assures constant alignment.

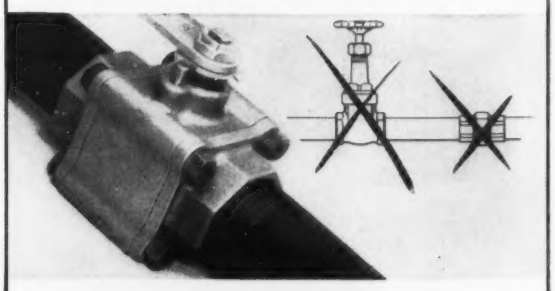
Write for Bulletin No. 335

TINNERMAN PRODUCTS, INC.
BOX 6688, DEPT. 12, CLEVELAND 1, OHIO

For more details circle NED-174 F8 on enclosed inquiry slip

WORCESTER'S

Econ-O-"Miser" Ball Valve* cuts operating costs up to 40%



SERVES AS BOTH A VALVE AND UNION IN THE LINE

If you replace only 100 one inch 150 pound gate valves a year in your plant, the Econ-o-"miser" can save you at least $659. and up to $884. a year on this size alone. Easy in-line maintenance should replacement of parts become necessary . . . without touching the pipe ends, valve center section can be removed, seating surfaces or "O" rings replaced, and this unit re-installed in a matter of minutes.

For more information on this and Worcester's outstanding line of BALL, GATE, or NEEDLE VALVES contact:

WORCESTER VALVE CO., Inc.
18 Parker Street, Worcester, Mass. *Pat. Pending

For more details circle NED-175 F8 on enclosed inquiry slip

Here's the ROYAL way to help build a successful personal hygiene program!

Management at the Hartford, Conn. plant of Royal McBee have been singularly successful in formulating a personal hygiene program that is paying off in better health, employee appreciation and numerous savings.

After extensive research into the problem, Royal management selected SBS-60 Cream Deodorant Soap and Dispensers to spearhead their program because of its multiple advantages: (a) effective cleansing action that combines exceptional detergency with unusual mildness. (b) a cream consistency that makes it almost impossible to waste in either washrooms or showers. (c) provides a drastic reduction in housekeeping and maintenance work. (d) affords a lanolized, antiseptic cream-type soap whose deodorant action is appreciated by both men and women.

If your responsibility is to save money and increase the efficiency of personal hygiene in your plant, we offer the practical help of our service department. Without obligation, these experienced technicians can make a simple soap recommendation or develop a complete personal hygiene program for you.

Write Dept. 58-F6 **FREE:** Write for descriptive information on SBS line of industrial hygiene products

sugar beet products co. SBS WATERLESS WASHSTATION* "Brings the Washroom to the Worker" * T. M.

MAIN PLANT: 302 Weller St., Saginaw, Michigan Los Angeles, California • Newark, New Jersey

CANADIAN SUBSIDIARY: Chemical By-Products, Ltd., 23 Racine Road, Rexdale, Ontario, Canada

▲ For more details circle NED-176 F8 on enclosed inquiry slip ▲

New Plastic Material! Repairs Floor Cracks!

A new plastic material formulated for the specific purpose of repairing floor cracks and preventing surface deterioration is announced by The Monroe Company, Inc., Cleveland.

Before

After

Known as "Jiffy Floor", it is a fine granular, ready-to-use plastic product that can be applied without interfering with production or traffic. It readily fills hairline cracks, shallow holes, spalled floors or expansion joints. Immediately after application, it will withstand heaviest loads.

Jiffy Floor contains no asphalt, cement, sand or gravel. It will not crack, crumble or curl . . . is not affected by temperature changes . . . can be applied indoors or out.

Jiffy Floor is waterproof, dustless, skidproof and noiseless. Available in 5-10-30 and 55-gallon drums, ready for easy use. For further information, write *The Monroe Company, Inc., 10707 Quebec Avenue, Cleveland 6, Ohio.*

▲ For more details circle NED-177 F8 on enclosed inquiry slip ▲

Another Engineering First from TOMKINS-JOHNSON

The New T-J Spacemaker HIGH PRESSURE HYDRAULIC CYLINDER

1000 • 2000 P.S.I. Operating Pressure 3000

Truly another engineering first from Tomkins-Johnson, the new T-J Spacemaker High Pressure Hydraulic Cylinder will provide quality power performance at high operating pressures. ONLY T-J OFFERS YOU A HYDRAULIC CYLINDER WITH ALL THESE EXTRAS—*STANDARD*, AT NO EXTRA COST. Write to The Tomkins-Johnson Company, 617 N. Mechanic Street, Jackson, Michigan, for further details and Bulletin No. HSM-5-58.

T-J TOMKINS-JOHNSON

▲ For more details circle NED-178 F8 on enclosed inquiry slip ▲

GAS DEW POINT METER measures gases under pressure

Dew point of gases under pressure in pipe lines, compressed air lines, instrument air lines, and gas bottles can be measured by the Alnor Model 7200 meter. The portable, self-contained instrument functions from room temperature down to −80° F. Use under pressure obviates hand pumping for purging and adjustment of the pressure ratio. A by-pass valve and rupture discs protect the instrument. Made by **Illinois Testing Laboratories, Inc.**, 430 N. La Salle St., Chicago 10, Ill.

▲ For more details circle NED-179 F8 on enclosed inquiry slip ▲

SUBMINIATURE VIBRATOR frequency is 5 to 15 cps

Stiction can be eliminated with this subminiature vibrator, a 0.8-w unit developing about 1.7 G. It is 1.060 in. long, has a diameter of 0.65 in., and weighs 1.3 oz. Developing a frequency of 5 to 15 cps, the alternating-direct current unit has static shielding only, and is chrome plated. Mounting is in any position with screw lugs. Made by **Barrie Industries, Inc.**, Dept. A, 429 S. Western Ave., Los Angeles 5, Calif.

▲ For more details circle NED-180 F8 on enclosed inquiry slip ▲

CAULKING APPLICATOR applies cements, mastics, sealants

High volume pressure system, high pressure pumping mechanism, and hose and nozzle assembly comprise the Caulk-Flo applicator. Unit is placed on a 50-lb or 5-gal standard bucket to apply caulking and glazing compounds, roofing cements, mastics, sealants, putty, adhesives, and similar materials directly from bulk containers. Once clamped in place, three strokes of the pump handle pressurize the pail. The applicator nozzle weighs only 1 lb and swivels as directed. Made by **Force-Flo, Inc.**, Dept. N, Box 2442, East Cleveland 12, Ohio.

▲ For more details circle NED-181 F8 on enclosed inquiry slip ▲

NOW! *Adjustable Diameter and Open*

THOMSON BALL BUSHINGS

The BALL Bearing for *all* your **LINEAR MOTIONS**

LOW FRICTION • ZERO SHAKE OR PLAY
ELIMINATE BINDING AND CHATTER
SOLVE SLIDING LUBRICATION PROBLEMS
LONG LIFE • LASTING ALIGNMENT

The various types cover a shaft diameter range of ¼" to 4". Small sizes available in Stainless Steel. Write for literature and name of our representative in your city.

THOMSON INDUSTRIES, Inc.
Dept. C, MANHASSET, NEW YORK

Also manufacturers of NYLINED Bearings . . . Sleeve Bearings of DuPont NYLON

▲ For more details circle NED-182 F8 on enclosed inquiry slip ▲

FREE ANALYSIS OF YOUR DIFFICULT MACHINING PROBLEMS

Photo courtesy C-Mar Corp., Manasquan, N. J.

23 HOLES AND SLOTS DRILLED IN CERAMIC AT ONCE!

PROBLEM: drill 23 holes and slots in mica radar tube spacers repeatedly with exact spacing. **SOLUTION:** A Raytheon Ultrasonic Impact Grinding Analyst recommended using **ceramic** spacers instead; making the 23 cuts simultaneously. Tool was made with template to hold pieces while brazing to Impact Grinder tool cone. **RESULT:** spacers with .001" accuracy; tube life doubled.

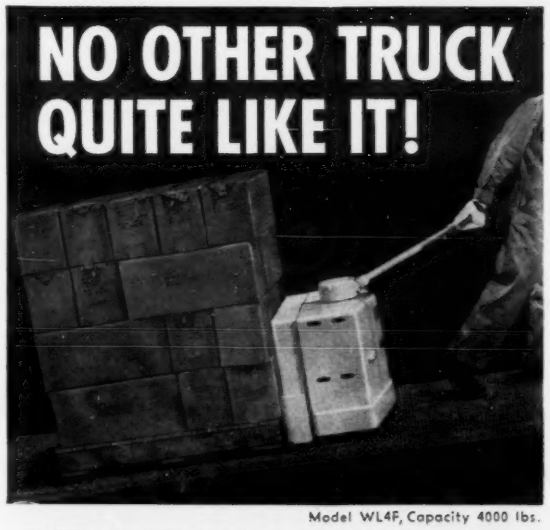
HOW YOU CAN BENEFIT—Whatever your difficult cutting, slicing, drilling, engraving or shaping problems—in hard or brittle materials—see your Raytheon Impact Grinding Analyst. Write Dept. NW6

RAYTHEON A-2108

RAYTHEON MANUFACTURING COMPANY
Commercial Equip. Div., Industrial Products Dept., Waltham, Mass.

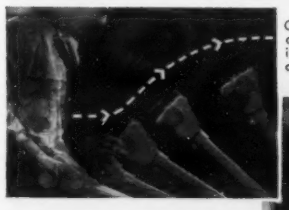
▲ For more details circle NED-183 F8 on enclosed inquiry slip ▲

NO OTHER TRUCK QUITE LIKE IT!



Model WL4F, Capacity 4000 lbs.

FLATTENS OUT STEEP RAMPS even with full-capacity load because its four 6-volt batteries supply up to 24 volts— twice the voltage of ordinary walkies. Total of 3 separate speeds, forward and reverse. All controls on handle.



COMPLETELY SAFE Exclusive control automatically puts truck in reverse when it touches operator's body.

LIGHTER, MORE MANEUVERABLE Only ⅔ the weight of conventional walkies. Works in close quarters because of short overall length and wide steering arc.

RAYMOND

ELECTRIC PALLET TRUCK

NEW BULLETIN — SEND FOR IT

The RAYMOND CORPORATION
4168 Madison St., Greene, N. Y.

☐ Send latest Raymond Electric Pallet Truck Bulletin.
☐ Have a Raymond representative call on me.

NAME TITLE
COMPANY
STREET
CITY STATE

▲ For more details circle NED-184 F8 on enclosed inquiry slip ▲

HANSEN *AUTOMATIC* **TACKERS**

End snags and tie-ups in the shipping room caused by clumsy label tacking methods. HANSEN ONE-HAND TACKERS are the new jam-proof way to get better fastening, faster & easier.

FOR PACKAGING • LABELING • SHELF LINING • ASSEMBLING • INSULATING • DISPLAYS AND MANY OTHER USES

- 36 Different Models . . . a tacker to meet any requirement!
- Jam-Free Performance!

WRITE today for FREE booklet.

A. L. HANSEN MFG. CO.
5164 RAVENSWOOD AVENUE • CHICAGO 40, ILLINOIS

▲ For more details circle NED-185 F8 on enclosed inquiry slip ▲

AUTOGIL . . . a new, heavy-duty automatic guillotine . . . eliminates costly hand cutting . . . increases production.
Available in two sizes . . . two types . . . up to 5" or 15" wide . . . infinite feed lengths . . . each type maximum 8" or 96" long . . . cuts material up to 3/16" thick . . . production speeds . . . from 120 cuts per minute . . . send for details to Dept. 25A.

Exclusive Distributors

HOBBS MANUFACTURING CO.
EST. 1862 41F Salisbury St., Worcester 5, Mass.

Representatives in Irvington, N. J.; Chicago, Ill.; Cleveland, Ohio; Greenville, S. C.; Toronto, Ont.

▲ For more details circle NED-186 F8 on enclosed inquiry slip ▲

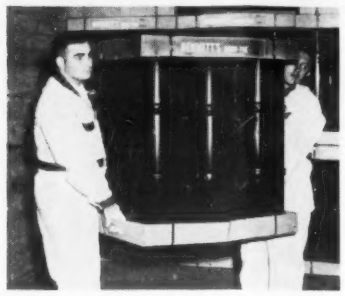
Other FLEX-A-PRENE "Firsts"

- Lint free — no wicking action.
- All parts non-toxic — non-allergic.
- Self-adjusting — snug-fitting.
- Simply designed for easier filter removal.
- Inside of frames serrated for airtight locking.
- Weighs only 1 ounce.
- Designed for use with goggles or spectacles.
- Only 4 tough long-wearing, interlocking parts.
- Non-irritating plastic frames — unbreakable in normal usage.
- Prenex filter outlasts all throw-away types. Savings pay the cost of a complete mask.

FLEXO Products, Inc. Westlake, Ohio

▲ For more details circle NED-187 F8 on enclosed inquiry slip ▲

PAIL PACKAGE UNIT
minimizes empty pail handling time



The 27-pail Handy-Pak for shipping empty pails reduces the handling time required from receiving to storage, storage to filling, and filling to storage or shipment. The 5-gal or other size containers are also protected against scuffing or other damage. The package is easily carried by two men, or it can be handled in multiples by hand or powered trucks. Pails can be stacked 15-high. The Handy-Pak consists of top and bottom caps of corrugated board, between which are 27 steel pails packed in three layers. Entire assembly is unitized by steel straps. Filled containers can be capped and strapped in 9, 18, or 27-unit packages. Made by **Bennett Industries, Inc.**, Dept. ED, Peotone, Ill.

▲ For more details circle NED-188 F8 on enclosed inquiry slip ▲

NEEDLE ROLLER BEARING
cage type offered in two sizes

Dimensionally interchangeable with heavy duty needle bearings, the Cagerol needle type roller bearing provides adequate capacity where excess misalignment prohibits using the greater capacity of full-complement bearings. The retainer-equipped bearing is offered in two standard stock sizes, with or without separable inner races. A one-piece, channeled outer race contains a single row of rollers in a continuous steel cage. Outer ring and rollers are hardened and ground. Made by **McGill Mfg. Co.**, Bearing Div., 1250 N. Lafayette St., Valparaiso, Ind.

▲ For more details circle NED-189 F8 on enclosed inquiry slip ▲

AIR LINE MOISTURE EXTRACTOR
for 1/4 to 3/4-in. lines to air tools

Dry air, to protect all types of intermittently operated, air powered equipment, is assured by this DryAir 400 moisture extractor. It automatically separates oil, water, and other foreign matter from the air. It is available to fit lines ranging in size from 1/4 to 3/4 in. handling maximums of 18 to 120 cfm, respectively. Made by **Spee-Flo Co.**, Dept. NED, 6614 Harrisburg Blvd., Houston 11, Tex.

▲ For more details circle NED-190 F8 on enclosed inquiry slip ▲

...and dares you to damage it

This is no ordinary hopper. It's a Roura hopper. And Roura makes 'em rugged. It takes on the toughest assignments . . . day in and day out . . . and comes back for more. Even the crash-bang handling of careless lift truck operators doesn't bother a Roura for it's built of extra heavy metal . . . welded with care . . . braced and double-braced . . . for years of trouble-free service.

Your Roura Self-Dumping Hopper will cut hand-unloading costs at least 50% . . . pay for itself before you know it. Available in sizes for ½ to 2 cubic yards for use with fork or platform lift trucks, mounted on live skids or with malleable or rubber tired casters. Literature and other information available on request ROURA IRON WORKS, INC., 1415 Woodland Ave., Detroit 11, Mich.

ROURA *Self-Dumping* **HOPPER**

▲ For more details circle NED-191 F8 on enclosed inquiry slip ▲

BEVERLY *Pneumatic* **THROATLESS SHEAR**

CAPACITY 3/16 MILD STEEL 10 GA. STAINLESS

FASTER, EASIER CUTTING *to any Shape!*

- Compactly built for maximum visibility and efficiency
- Operates on 35 to 150 PSI air pressure
- Adjustable power and return stroke length and speed

Beverly Pneumatic Shears combine all the advantages of Beverly Throatless Shears with fast, effortless cutting action through air cylinder operation. Air operation speeds work, permits accurate cutting to a pattern or template, as operator can concentrate on guiding work through the shear. Flow control valves permit precise adjustment of stroke speed; adjustable actuating arm controls stroke length. Foot Switch permits operator to use both hands on the work piece. Operates on 110V. 60 cycles AC and 35 to 150 PSI air pressure.

See your nearby Beverly Distributor
Write for catalog sheet and complete details.

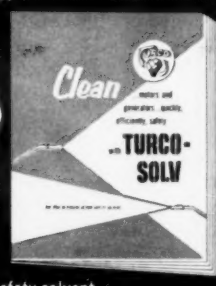
BEVERLY SHEAR MANUFACTURING CO.
3016 W. 111th STREET • CHICAGO 43, ILLINOIS

▲ For more details circle NED-192 F8 on enclosed inquiry slip ▲

spray clean

- ELECTRICAL EQUIPMENT
- PLANT EQUIPMENT

free folder



tells why... only **TURCO-SOLV**

the detergent-action safety solvent offers you this unchallenged combination of user benefits

- SAFE ON ALL EQUIPMENT
- NO RESIDUE
- NON-FLAMMABLE*
- PEAK CLEANING EFFICIENCY
- OPTIMUM EVAPORATION RATE
- LOWER TOXICITY

*UNDER NORMAL USE CONDITIONS

TURCO PRODUCTS, INC.
Chemical Processing Compounds
6135 So. Central Ave., Los Angeles 1, Calif.
Factories: Newark, Chicago, Houston, Los Angeles, London, Rotterdam, Sydney, Mexico City, Naha (Okinawa)
Manufactured in Canada by B. W. Deane & Co., Montreal
Offices in all Principal Cities

▲ For more details circle NED-193 F8 on enclosed inquiry slip ▲

AND

No band saw—but no band saw—cuts metal any better than a Famco. So if you are in the market for a cut-off saw make sure you investigate Famco. There are more elaborate saws, we admit. But to cut off metal, you can't do better than a sensibly priced, sensibly engineered Famco. Find out about Famco Band saws today.

Model 612

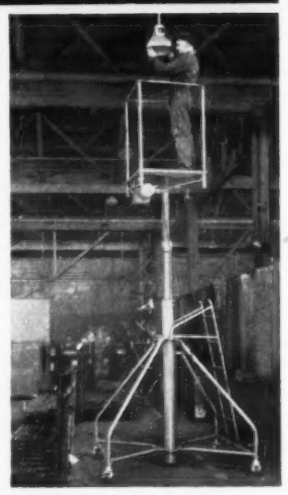
Write for FREE Famco Band Saw brochure now.

famco machine company
3108 SHERIDAN ROAD • KENOSHA 6, WISCONSIN
AIR PRESSES • ARBOR PRESSES • BAND SAWS • DRILL PRESSES • FOOT PRESSES • POWER PRESSES • SQUARING SHEARS • MILLING MACHINES

▲ For more details circle NED-194 F8 on enclosed inquiry slip ▲

1-MAN TOWER S-T-R-E-T-C-H-E-S TO REACH OVERHEAD WORK— SHRINKS TO CLEAR DOORS

Foot-Button Control with Battery Power or 110-volt a-c Plug-In



HIGH-LEVEL MAINTENANCE can be completed faster, better and cheaper with this handy one-man work tower!

Moto-Lift ROLLS to the job and locks . . . RISES hydraulically under control of a foot button on the platform . . . LOWERS quickly and safely . . . TELESCOPES to clear low, narrow doors and aisles.

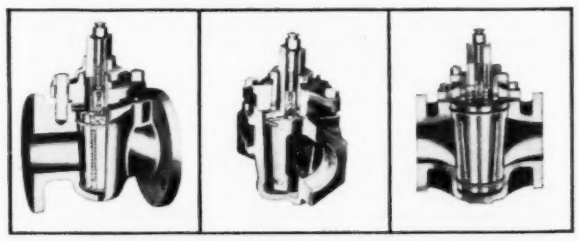
12-volt d-c battery operated model is *self-contained* —can be used anywhere. 110-volt a-c plug-in model has 50-ft. cable to permit work *along 100 ft.* from one electric outlet. Elevates 6'8" to 17'. 400-lb. capacity.

Write for FREE BULLETIN 76

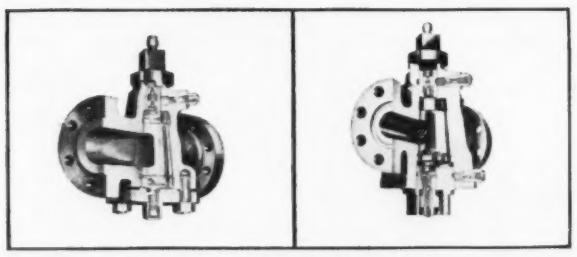
SAFWAY
STEEL PRODUCTS, INC.
6212 W. State St., Milwaukee 13, Wis.

For more details circle NED-195 F8 on enclosed inquiry slip

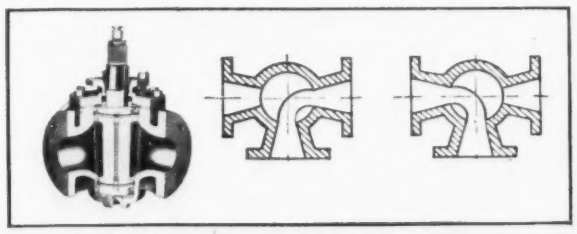
What are your valve needs?
SPECIFY FROM
ROCKWELL-NORDSTROM'S
COMPLETE VALVE LINE



For working pressures from 175-lb to 800-lb, Rockwell-Nordstrom valves are available in semi-steel and corrosion resisting alloys in sizes from 1" to 24".



For working pressure to 10,000-lb, Rockwell-Nordstrom Hypreseal valves are available in steel and corrosion resisting metals in sizes to 30". Operated by wrench, gear or power actuators.



Rockwell-Nordstrom Multiport valves permit three and even four way control with one valve . . . ideal for batching, blending or relief service. See diagrams for a few of the possible flow arrangements.

Rockwell-Nordstrom is the world's most complete line of lubricated plug valves, plug valve lubricants and operating accessories. Whatever your needs, you'll get better flow control at far lower cost when you specify from the Rockwell-Nordstrom line.

Rockwell Manufacturing Co., Pittsburgh 8, Pa.
Canadian Valve Licensee: Peacock Brothers Limited.

Circle No. 196 on the reply card in this magazine for free details.

ROCKWELL-Nordstrom VALVES
it's **ROCKWELL**
MANUFACTURING COMPANY

For more details circle NED-196 F8 on enclosed inquiry slip

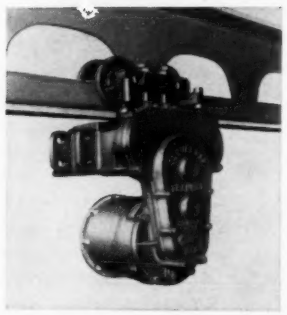
TIME PUNCH
attendance or job cost data are punched into IBM cards

The 8200 time punch is available in two basic types. Model 1, used in attendance time applications, produces IBM punched card records of employee time. It identifies the day of the week, hour and hundredths of hours, plus an on-time designation. Model 2 job cost time-data punch will punch start and stop times, and such variable data as employee serial number and job number. After a card is punched, an interlocking device prevents further card insertion until at least one variable data lever is reset.

The time-data punch may be used for both attendance and job cost applications where plant layout permits. As each card is inserted into the card receiver it is moved automatically to the punching location, punched, and delivered ready for data processing to the 250-card capacity stacker in the recorder base. A key-operated time suppression device is optional. Made by **International Business Machines Corp.**, Dept. JBD-1, 590 Madison Ave., New York 22, N. Y.

For more details circle NED-197 F8 on enclosed inquiry slip

MONORAIL TRACTOR
has drawbar pull of 300 lb



Drive for one or more carriers in a monorail train or motorization of hand power cranes and carriers are applications for the Type MT tractor, a motor-powered unit for use on overhead tramrail systems. It is driven by two 5-in. diameter steel or rubber rollers under spring pressure against the bottom of the track. Suited for systems with inclined tracks, the tractor has a minimum speed of 50 fpm with a ½-hp motor, 75 fpm with a ¾-hp motor, and 100 fpm with 1, 1½, or 2-hp motors. Maximum speed is 350 fpm and drawbar pull is 300 lb. Both standard open-bar collectors and Safpowrbar collectors can be mounted on the tractor which will operate through electrified Cleveland Tramrail switches. A power and free handle makes pushing by hand possible. Made by **Cleveland Crane & Engineering Co.**, Cleveland Tramrail Div., 1143 E. 283rd St., Wickliffe, Ohio.

For more details circle NED-198 F8 on enclosed inquiry slip

Gleason Reel on New Cleveland Tramrail Vertical Rod Storage System

CONTROLS POWER CABLE TO GRAB MOTOR

The ingenious new Tramrail Vertical Rod Storage System for storage of hot rolled steel coils at Cleveland Cap Screw Company saves up to 60% in space. Designed by Cleveland Crane and Engineering Co., the heart of the system is a special coil grab which delivers coils to vertical storage "cells" having a total capacity of 2190 tons. Power cable to the grab motor is handled efficiently by a Gleason Cable Reel specially engineered for the job.

Check on Gleason Reel advantages whenever you need safe cable control for equipment-in motion. Write for catalog and suggestions

Gleason Reel Corp
738 N. Plankinton Ave., Milwaukee 3, Wis.
SPRING REEL HEADQUARTERS FOR ALL INDUSTRY

For more details circle NED-199 F8 on enclosed inquiry slip

HIGH VISIBILITY—RUGGED CONSTRUCTION

Lite-TUFF boxes are made from clear, rugged Tenite II and have stainless steel hinges. Standard boxes available in many sizes and compartment arrangements. Uses innumerable!

Send for Plot Plan Sheets which show specifications of Standard Boxes.

SHOE FORM CO. INC.
Auburn, New York

For more details circle NED-200 F8 on enclosed inquiry slip

Permanently End Condensation Drip, Rust and Corrosion with NoDrip Plastic Coating!

Here is the inexpensive, easy way to solve your condensation problem once and for all. NoDrip plastic coating acts immediately to insulate and protect tanks, pipes, walls, ceilings, air ducts and other metal equipment against condensation drip, rust and corrosion. NoDrip can be applied by anyone without special experience with brush, trowel or spray. NoDrip is also resistant to acid, alkali and brine . . . protects concrete, brick, plaster, tile, wood or composition surfaces.

FREE

32-PAGE NoDrip DATA HANDBOOK - Complete with photographs, charts and technical information to help solve your condensation problem. Write today!

Available at leading plumbing and mill supply houses
J. W. MORTELL COMPANY 526 Burch St., Kankakee, Ill.

For more details circle NED-201 F8 on enclosed inquiry slip

Fishing for carbide grinding economies?

Norton lures, designed to help you cut carbide grinding costs, include a complete selection of top quality wheels — K Bond† CRYSTOLON* wheels and wheels using mined or man-made diamonds in three Norton-pioneered bond types.

The K Bond enables precise duplication of money-saving CRYSTOLON wheels. And Norton leadership in diamond wheel development is backed by *certified* diamond content of each diamond wheel. For further facts on this widest range of top quality carbide grinding wheels, see your Norton Abrasive Engineer or Distributor.

NORTON COMPANY, General Offices, Worcester 6, Mass.

NORTON ABRASIVES
Making better products . . . to make your products better

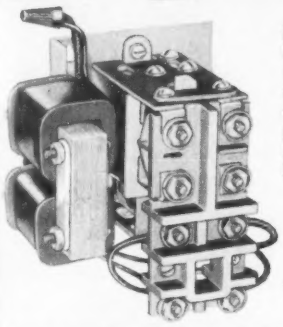
*Trade-Mark Reg. U. S. Pat. Off. and Foreign Countries †Patent applied for W-1846

For more details circle NED-202 F8 on enclosed inquiry slip

WARRICK Floatless Electrode Type

LIQUID LEVEL CONTROLS . . .

give you all these advantages!



No moving parts in the liquid • Easy to install • No adjustments necessary • Unaffected by acids or caustics • Unaffected by pressure or temperature • Standard 2&3 pole units listed by U/L

Write for 32-page Catalog which gives complete specifications

Two pole control shown at left

YOU CAN USE OUR CONTROLS FOR:

- Single & multiple pumps
- Motor & solenoid valves
- High & low cutoffs & alarms
- Sewage & waterworks
- Chemical Industries
- Food & Dairy Industries
- OEM applications

Special controls to custom requirements

CHARLES F. WARRICK CO.
1964 W. Eleven Mile Road, Berkley, Michigan
Dep't 6 Telephone JOrdan 4-6667

▲ For more details circle NED-204 F8 on enclosed inquiry slip ▲

Easy to operate. Extremely durable. Simple to maintain.

For your files: Complete specifications and price list for all models. SEND INQUIRY CARD TODAY.

"CADILLAC"
LOW-COST
WINCH HOIST

Every Hoist PRE-TESTED for MAXIMUM PERFORMANCE MAXIMUM SAFETY

Check these features:

- Precision-built of certified materials.
- High-strength, corrosion-resistant TENZ-ALOY castings. Tensile strength 32,000.
- Light weight and compact.
- Stainless steel springs and shafts.
- Manganese bronze cam reduces pawl wear.
- "Safety-valve" handle breaks at severe overload.
- Drop-forged, heat-treated hooks. Safety hooks available.
- Equipped with galvanized, pre-formed aircraft wire rope.
- Tested to full 50% overload.
- Full year guarantee against defective workmanship and materials.

Model 202WX 1½-ton capacity equipped with 20′ of 3/16″ galvanized wire rope. Lifting ratio approx. 30 to 1. Weight 10 lbs. Min. distance between hooks 25″. 20′ single, 10′ double line. Models from ½ to 2 tons cap. Prices: $29.50 and up.

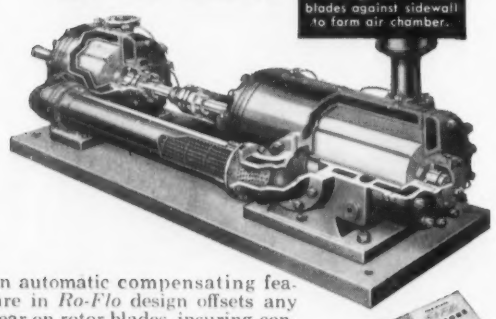
ALUMINUM PRODUCTS, INC.
P.O. BOX 1462-N FORT LAUDERDALE, FLORIDA

▲ For more details circle NED-205 F8 on enclosed inquiry slip ▲

Ro-Flo **COMPRESSORS**

Peak efficiency at all times

Centrifugal force keeps blades against sidewall to form air chamber.



An automatic compensating feature in *Ro-Flo* design offsets any wear on rotor blades, insuring constant efficiency. Blades move in and out of longitudinal slots. Centrifugal force keeps them in constant contact against cylinder.

RATINGS — *Twelve* sizes of two-stage *Ro-Flo* compressors from 250 to 1800 cfm at pressures 60 to 125 pounds gauge. *Twenty* different single-stage units handle pressures to 50 pounds gauge and from approximately 50 to 3200 cfm.

For complete information ask for Bulletin 1688244. Call your nearby A-C office or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wisconsin.

Ro-Flo is an Allis-Chalmers trademark.

ALLIS-CHALMERS A-C A-5613

▲ For more details circle NED-206 F8 on enclosed inquiry slip ▲

CLAMP REPAIR KIT
has 45 Punch-Lok clamps

An assortment of 45 standard Punch - Lok clamps, including both preformed and open-end types, and a P-38 Loking Tool for tensioning and locking all clamps comprise the Clamp-Master Kit K-45. Intended primarily for making hose connections and repairs, kit affords a simple means of clamping and banding split planks, fence posts, ladder rails and tool handles, as well as seizing rope ends, splicing cable, tying conduit, wrapping pipe insulation, and reinforcing utility pole crossarms. Clamp sizes range from ½ to 10 in. diameter. Available from **Punch-Lok Co.**, 323 N. Justine St., Chicago 7, Ill.

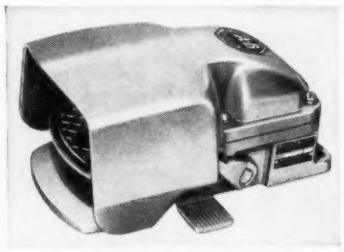
▲ For more details circle NED-207 F8 on enclosed inquiry slip ▲

ABRASIVE WHEELS & HONES
three types use man-made diamonds

Resin-bond MD abrasive wheels and hones, made of man - made diamonds developed by General Electric Co., are available in 100 and finer grits and in 25, 50, 75, and 100 concentrations. Metal and vitrified bond MD wheels are made in selected concentrations in the same range of grit sizes. These wheels supplement the regular diamond abrasive line of **Carborundum Co.**, Dept. NED, Box 337, Niagara Falls, N. Y.

▲ For more details circle NED-208 F8 on enclosed inquiry slip ▲

HEAVY-DUTY FOOT SWITCHES
redesigned line is more versatile



Redesigned Bulletin 805, Style A foot-operated switches are made in open, partly covered, and completely covered treadle styles. Base has been extended to increase stability and eliminate need for bolting unit to floor. Latch for holding treadle down can be furnished. Either one or two snap-action contact blocks can be furnished, and each has normally-open and normally-closed double-break silver contacts. First or both sets of contacts can be locked in. Contact ratings are 6 amp, 110 v; 3 amp, 220 v; 1.5 amp, 440 v; and 1.2 amp, 550 v ac. Direct-current ratings are 0.4 amp, 115 v; 0.2 amp, 230 v; and 0.1 amp, 550 v. Watertight, oiltight, and explosionproof enclosures are available. Made by **Allen-Bradley Co.**, 1334 S. Second St., Milwaukee 4, Wis.

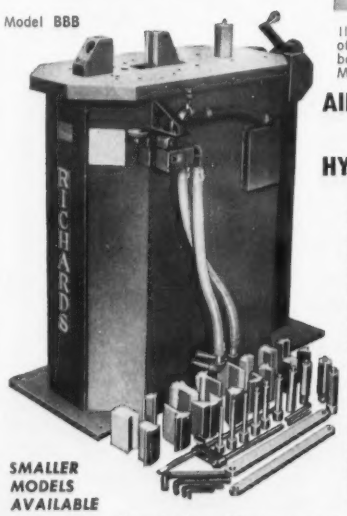
▲ For more details circle NED-209 F8 on enclosed inquiry slip ▲

Multiform

BIG BROTHER BENDER

Illustrated above are a few of the many forms that can be produced efficiently on the Multiform Bender.

Model BBB



SMALLER MODELS AVAILABLE

AIR OPERATED MODELS IN FOUR SIZES
HYDRAULIC—3 MODELS

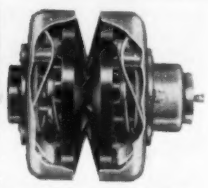
The heavy duty Big Brother Bender is designed for fabricating bus bars, brackets, fixtures, etc., without special tooling. Air controlled with finger tip response. Comes complete with dies, mandrels and wrenches—punching and blanking dies extra. Will punch holes up to 1″ and form material up to ¼″ thick by 4″ wide. We also build smaller models, hand or air operated, for bending materials up to ⅛″ x 1½″.

Send for illustrated folder M6

J. A. RICHARDS CO. Myrtle & Pitcher Sts. Kalamazoo, Mich.

▲ For more details circle NED-210 F8 on enclosed inquiry slip ▲

Hi-Lo Load-O-Matic Control Eliminates Pulley Slow Down



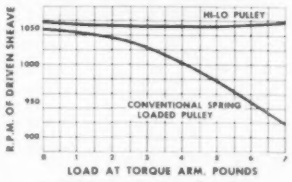
Hi-Lo Variable Speed Pulleys positively maintain the desired speed ratio over a wide range of load variation by means of an exclusive cam and cam follower assembly. This means: Pulley speed is independent of load and load changes. "Drag" is eliminated and high shock absorbency provided.

Pulleys do not compress belt due to spring pressure. Springs are not driving members. They act only to keep pulley faces in contact with belt.

Pulleys automatically regulate belt tension. Because of the cam assembly, belt is never under more tension than required by the load. Double cams maintain constant belt alignment.

Request details and prices. Ask for Bulletin A-458

HI-LO PULLEYS COMPARED TO OTHER VARIABLE SPEED PULLEYS

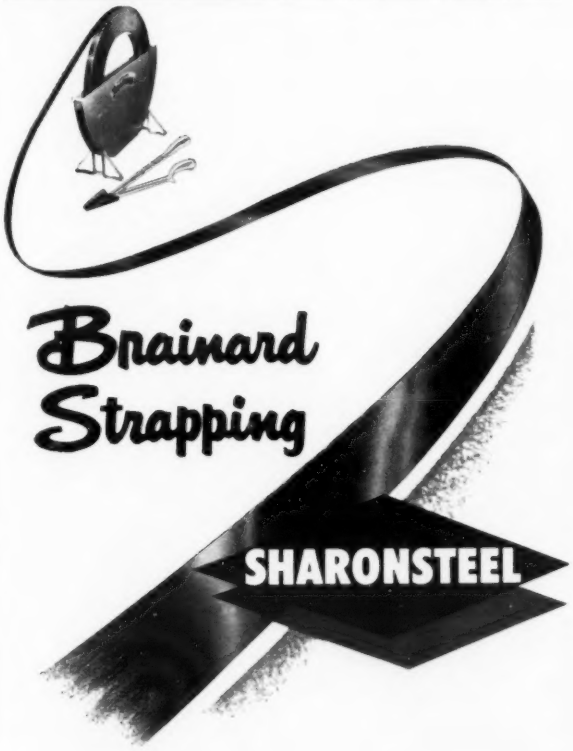


Available in sizes from .5 to 5 hp., ratios to 2.5/1 (single pulley) 6.25/1 (double pulley).

Manufactured By HI-LO MANUFACTURING COMPANY

Nationally Distributed By LOVEJOY FLEXIBLE COUPLING COMPANY
311 N. Lavergne Ave., Chicago 44, Ill.

▲ For more details circle NED-211 F8 on enclosed inquiry slip ▲



. . . WITH EXTRA BACKING

Brainard Steel Strapping has something extra to offer. As a division of Sharon Steel, Brainard Strapping is fabricated from steel that is quality controlled from mine to market. Sharonsteel, a buy-word among steel buyers, is your assurance of the finest steel strapping available when you buy from Brainard.

Sharon quality in Brainard Strapping is available in all standard sizes and gauges of tensional and heavy duty strapping.

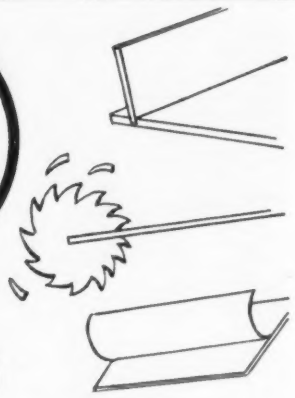
2302

Brainard Strapping

The Brainard Steel Division of
SHARON STEEL CORPORATION SHARON STEEL

▲ For more details circle NED-212 F8 on enclosed inquiry slip ▲

FREE BOOKLET!



MASONITE FABRICATORS

can smooth your production

Why do it yourself? Let Masonite fabricators process hardboard to your specifications. You save plant space, equipment cost, production time.

Let us cut, drill, perforate, rout, shape, sand and laminate these grainless, durable panels. In jig time, too. Plants located in Elizabeth, N.J.; Cincinnati, Ohio; Los Angeles, Calif.

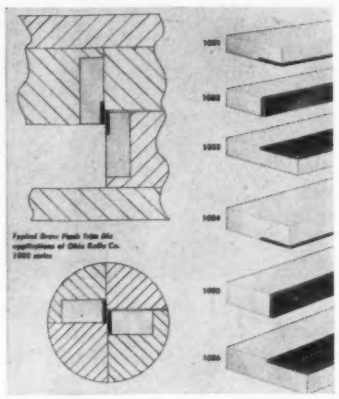
Send for our booklet describing the services offered by Masonite fabricators. It's free. Write Masonite Corporation, Dept.NED6, Box 777, Chicago 90, Ill.

*Masonite Corporation—manufacturer of quality panel products.

MASONITE Panel Products

▲ For more details circle NED-213 F8 on enclosed inquiry slip ▲

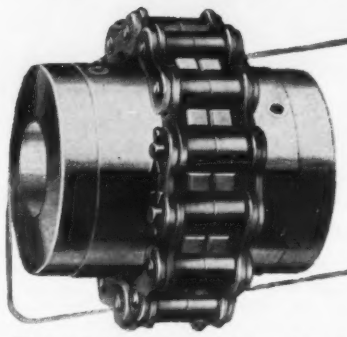
COMPOSITE DIE SECTIONS
for cut-off, blanking, other uses



Six new O-Kni-Co standard composite sections for use in die construction make a total of 17 now available for cut-off, blanking, and forming uses. They can also be used for draw and pinch trim dies, heels, forming, flanging, back-up plates, guides, and hold-down gibs. Composite sections are stocked in lengths or bars up to 125 in. They are delivered in specified lengths with the cutting or forming edge hardened, machined, and ground. The soft steel backing to which the hardened tool steel (Rockwell 64-66) is bonded can be drilled for dowel and screw holes. Made by **Ohio Knife Co.**, Dept. H-77, Dreman Avenue, Cincinnati 23, Ohio.

▲ For more details circle NED-216 F8 on enclosed inquiry slip ▲

LINK-BELT "RC" flexible couplings



1. Equalize load
2. Maintain proper balance at high or low speeds
3. Compensate for end float and misalignment

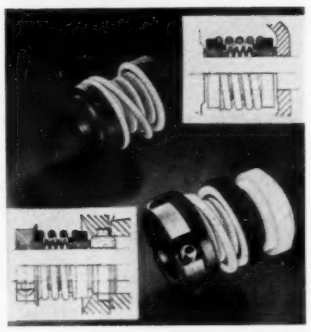
This triple advantage for better shaft connection results from Link-Belt's exclusive divided roller design. Other benefits include compactness, easy installation. And Link-Belt "RC" flexible couplings are readily available at all authorized Link-Belt stock-carrying factory branch stores and distributors—in 30 bore sizes from ½ to 12-in. . . . and ratings up to 1000 hp. 14,221

Write to LINK-BELT COMPANY, Prudential Plaza, Chicago 1, Ill., for Folder 2363.

LINK-BELT "RC" FLEXIBLE COUPLING

▲ For more details circle NED-219 F8 on enclosed inquiry slip ▲

END-FACE SHAFT SEAL
only inert Teflon exposed to liquid



Main sealing member of the Type 20 bellows type end-face shaft seal is a bellows of chemically-inert Teflon, integrally molded with a sealing face of filled Teflon. Sealing face material and the opposed mating face material can be varied to suit specific liquids, temperatures, and pressures. Springs are protected by Teflon sleeves. A double-ended seal with a sealing face integrally molded to both ends of the Teflon bellows is employed for internal mounting. For external mounting, a single-faced seal is used and the rotating member is secured to the shaft with a metal clamping ring. Both types can be used with chemicals prone to crystallization. Sizes range from ¾ to 2 in. Made by **Crane Packing Co.**, Dept. NDC, 6400 Oakton St., Morton Grove, Ill.

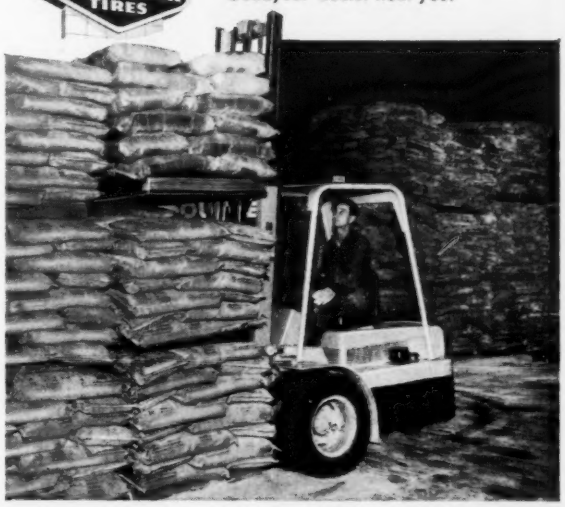
▲ For more details circle NED-217 F8 on enclosed inquiry slip ▲

▲ For more details circle NED-214 F8 on enclosed inquiry slip ▲

Precision Proportioning Pumps

Hills-McCanna Co.—Details and specifications of proportioning pumps offered by company are covered in 8-page Catalog 604. Maximum capacities of pumps covered range from 6 cc per min to 730 gph, per feed. Applications range from small volume metering to hydraulic drive units for up to maximum delivery.

▲ For more details circle NED-218 F8 on enclosed inquiry slip ▲



Stack 'em up

—with Goodyear Pneumatic Industrials and save!

SUPER RIB —All-new, all-purpose tire gives unusual strength and staming in industrial service

HARD ROCK LUG — For industrial, mine and lumber service—where snags and cuts are a problem

LUG —For industrial, mine or material handling service, where deep, non-directional traction is required

RIB ALL-WEATHER —All-purpose tire with hi-flotation—recommended for wheelbarrows, motor scooters, and material handling

STUDDED — For extra traction in soft going, industrial and power-mower service

ALL-WEATHER —For industrial, power-mower, mine service, or highway service, where traction is a must

ORDER THESE INDUSTRIAL TIRES FROM YOUR GOODYEAR DEALER.

FOR the big loads and long grinds, it'll pay you to specify the finest industrial tires money can buy—Goodyear Pneumatic Industrials. They're built with Goodyear's exclusive Triple-Tempered 3-T Cord—to provide exceptional resistance to heat, impact and bruising. Next time you're buying new equipment or new tires, pick Goodyear Pneumatics—you'll save in the long run. Goodyear, Industrial Tire Sales, Akron 16, Ohio.

Use the Right Tire for the Job—Buy and Specify

GOODYEAR INDUSTRIAL TIRES

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

All-Weather—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

▲ For more details circle NED-220 F8 on enclosed inquiry slip ▲

Drill Presses stick like glue . . . work in any position

Drilling steel beams or channels . . . large jigs or dies . . . deckplates or bulkheads . . . large plates—wherever a drill press must work upside down, on its side or in tight spots, you'll want a Black & Decker Magnetic Drill Press.

Ideal for industrial plants, structural steel fabricators, sheet metal work, welding shops, shipbuilding or heavy machinery work. *See them now!* ¾" or 1¼" capacity. THE BLACK & DECKER MFG. CO., Dept. 1906, Towson 4, Md. (In Canada: Brockville, Ontario.)

Leading Distributors Everywhere Sell

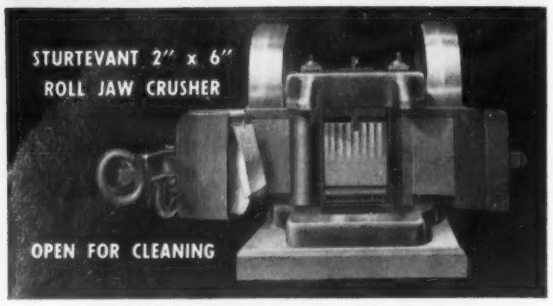
Look Under "TOOLS-ELECTRIC" in Yellow Pages

Black & Decker®

Quality Electric Tools . . . Power-built to set the pace

▲ For more details circle NED-215 F8 on enclosed inquiry slip ▲

SAMPLING TIME slashed...



. . . by Small-Scale Duplication of Full-Scale Production!

12-PAGE BULLETIN PROVES IT!

SEE how exclusive "OPEN-DOOR" design makes cleaning and maintenance quick and easy . . . how rugged construction keeps equipment running round the clock for years.

COMPARE the capacities and performance of Sturtevant Roll Jaw Crusher, Crushing Rolls, Swing Sledge Mills and Sample Grinder with what you are now using.

LEARN why the "blue chips" in industry and education prefer Sturtevant Laboratory Equipment.

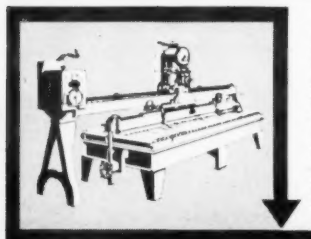
WRITE FOR 12-PAGE BULLETIN on Sturtevant Laboratory Equipment and other custom-built equipment listed below. STURTEVANT MILL CO., 114 CLAYTON ST., BOSTON 22, MASS.

STURTEVANT
Dry Processing Equipment

The "OPEN-DOOR" to *lower* operating costs over *more* years

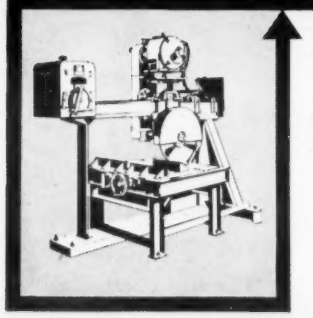
CRUSHERS • GRINDERS • MICRON-GRINDERS • SEPARATORS
BLENDERS • GRANULATORS • CONVEYORS • ELEVATORS

▲ For more details circle **NED-223 F8** on enclosed inquiry slip ▲



Clean, accurate high-speed cuts on ANY METAL, PLASTIC, or WOOD. Cut-offs for 10" to 48" cuts . . . long-cut saws for 4' to 60' cuts.

Cuts Metal FAST!



Choose from dozens of models . . . 3 to 125 HP . . . 6" to 87" blade capacity. Cross movement available.

WRITE TODAY FOR Free Brochure

TY-SA-MAN Machine Co.
550 White Ave.
Knoxville, Tenn.

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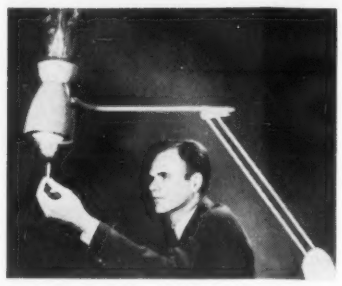
STOP THIEVES WITH "BLACK LIGHT!"

Ideal burglar protection for spacious areas at a reasonable cost, the transistorized Kidde Photo-Electric Burglar Alarm System uses an invisible beam of "black light," is completely tamper-proof, requires no special wiring. It can be installed simply and easily by one man. For more information about this new, U.L.-approved protection, send the coupon or write to Kidde today!

Walter Kidde & Company, Inc., 624A Main St., Belleville 9, N.J.
Send me your Photo-Electric Burglar Alarm Data Sheet U-2.
NAME _____
ADDRESS _____
CITY _____ STATE _____

▲ For more details circle **NED-225 F8** on enclosed inquiry slip ▲

HIGH-INTENSITY LAMP is cool-operating for close work



Fully adjustable to any angle or position, this Kold Lamp is designed to provide high light intensity for close work. Flue or stack effect and two-part shade combine to protect operator from burns. Universal "friction-free" mechanism allows easy adjustment. Lamp extends from a minimum of 12 to a maximum of 38 in. from mount on desk, wall, or machine. Eight types are available in incandescent and fluorescent types. Made by **General Lamps Mfg. Corp.**, Faries Lamp Div., Dept. MD, Elwood, Ind.

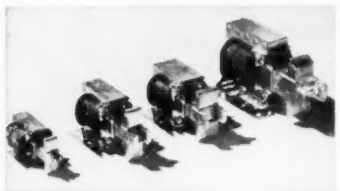
▲ For more details circle **NED-226 F8** on enclosed inquiry slip ▲

TRAVELING RACK holds up to seven detachable trays

Easily maneuvered in crowded quarters and through office doorways, the Junior Special traveling rack carries up to seven easily detachable hook-on trays on one side. It can be used where space limitations preclude use of a standard Senior or Junior size rack with trays on both sides. Made by **Hartman Metal Fabricators, Inc.**, Dept. 7, 133 Murray St., Rochester 3, N. Y.

▲ For more details circle **NED-227 F8** on enclosed inquiry slip ▲

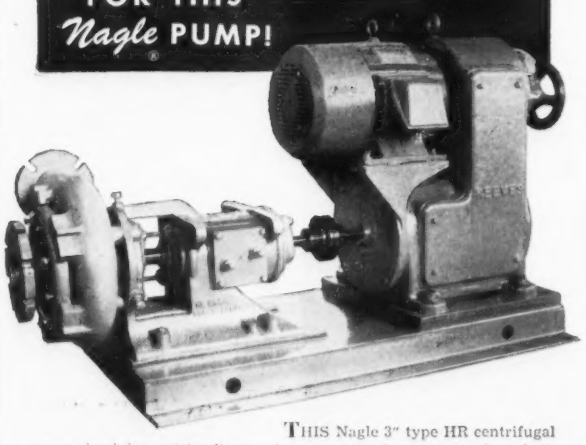
SOLENOIDS use double-plunger construction



Four sizes and 12 different models are offered in this line of Double TT solenoids, designed for intermittent or constant duty. The plunger design permits use of a large air gap between the plunger stem and the extremities of the frame legs, resulting in virtually level pull characteristics throughout the stroke. They are quiet operating, and have moisture-resistant coils, heavy-duty pull bars, and one-piece bobbins. Available for 110 or 220-v operation, solenoids have stroke lengths from $\frac{5}{8}$ to $1\frac{3}{8}$ in. Made by **Controls Co. of America**, Soreng Div., 9570 Soreng Ave., Schiller Park, Ill.

▲ For more details circle **NED-228 F8** on enclosed inquiry slip ▲

LIME SLURRY IS "DUCK SOUP" FOR THIS *Nagle* PUMP!

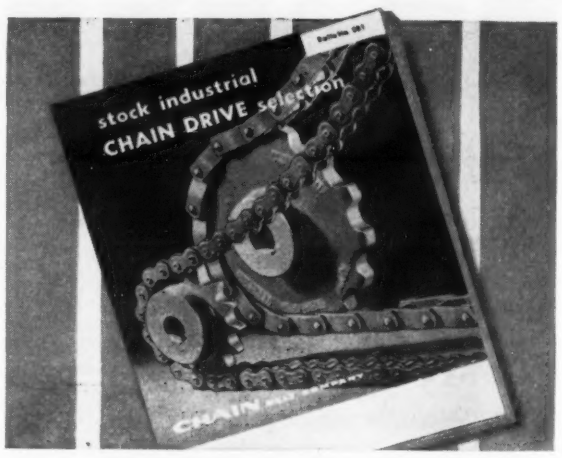


THIS Nagle 3" type HR centrifugal pump is giving outstanding performance at a large processing plant. It handles lime slurry. Variable speed drive for control of volume. The Nagle "H" series—of which the HR is one—is ideal for economically handling abrasive mixtures and slurries, corrosive and hot liquids. Can be placed above or below sump liquid level. Sizes from 1" to 10". Heads to 250'. Capacities to 4000 GPM. Send for data. Nagle Pumps, Inc., 1265 Center Ave., Chicago Heights, Ill.

NAGLE PUMPS

PUMPS FOR ABRASIVE AND CORROSIVE APPLICATIONS

▲ For more details circle **NED-229 F8** on enclosed inquiry slip ▲



You can select stock chain drives!

You can translate *your* horsepower requirements...*your* shaft sizes and speeds...*your* load classification...*your* space limitations...into the right size and type of drive chain and sprockets with CHAIN Belt's new Bulletin 581. It's simple and fast. You select from easy-to-read tables the exact chain needed for *most economical* service.

Send for Bulletin 581 today. CHAIN Belt Company, 4686 West Greenfield Avenue, Milwaukee 1, Wisconsin.

CHAIN BELT

▲ For more details circle **NED-230 F8** on enclosed inquiry slip ▲

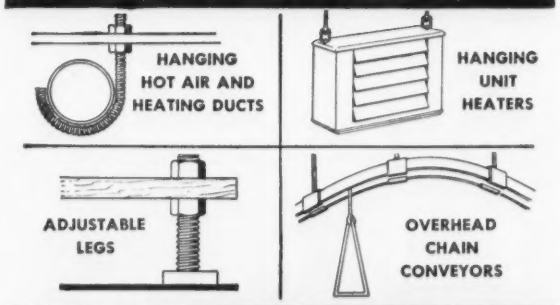
For Small Production Runs Cut Your Studs, Bolts, Hangers from REDI-BOLT®

CONTINUOUSLY THREADED STEEL RODS
13 SIZES, $^3/_{16}$" TO $1^1/_2$"

Small-run requirements for special studs, bolts, etc., are easy to handle, if you have a supply of REDI-BOLTS on hand. Just cut REDI-BOLT to the length you need and add standard nuts. No threading necessary. These continuously threaded steel rods eliminate the need for "big" special-bolt inventories and the expense of small-quantity purchases.

All 13 diameters are supplied in standard lengths of 24" and 36"; other lengths on special order. Precision threaded in two sizes: *Standard National Coarse* and *SAE (National Fine)*. Available with zinc plate or regular rust-resistant finish. Order a supply of various diameters, today.

IDEAL FOR 101 INSTALLATION, REPAIR, AND MAINTENANCE JOBS, TOO!



Made by the makers of REDI-ROD Steel and Aluminum Bars

Ask your Mill Supply House, or write

REDI-BOLT, Inc., 5312 Indianapolis Blvd., East Chicago, Ind.

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Magcoa Magnesium Hand Trucks...

Light! Fast! Economical!

The new nose plate on Magcoa hand trucks is unconditionally guaranteed to be unbreakable. The entire truck is stronger . . . yet *feather-lite*. It's easier to lift on and off delivery trucks . . . cuts driver fatigue, increases productivity. Magcoa trucks are available with 6, 8 or 10" wheels . . . with single, looped, or pistol grip handles. You can choose from over 60 different models and a *full line* of accessories. For details and specifications write direct or circle the reader service card.

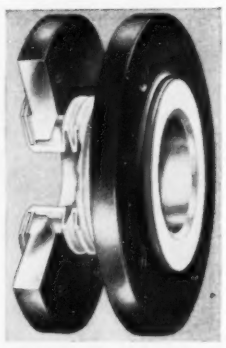
magcoa

MAGNESIUM COMPANY OF AMERICA
East Chicago 6, Ind.

Also designed and manufactured in Canada by Magcoa Limited, Toronto, Ontario

▲ For more details circle NED-232 F8 on enclosed inquiry slip ▲

Here's The Plain Truth About CHEMLON® Flexible Pipe Connectors



Chemlon Pipe Connectors are fabricated from chemically-inert DuPont Teflon and will handle practically all known acids, corrosives and solvents at pressures to 75 psi. They will withstand continuous flexing over a temperature range from −65° to +350° F. Severest vibration and misalignment causes little deterioration, and the connector acts as both an accoustical and mechanical dampener.

Other features: (1) Chemlon fabrication assures Teflon of high and uniform density; (2) wall thickness is uniform throughout convoluted area; and (3) bellows are formed at full free length to reduce residual and working strain to an absolute minimum.

Supplied to fit any pipe size from ½ to 12" and available with companion flanges conforming to American Standard Class 125 Cast-Iron Pipe Flange specifications.

Request full information. Crane Packing Co., 6411 Oakton St., Morton Grove, Ill. (Chicago Suburb)

John Crane — MECHANICAL PACKINGS · SHAFT SEALS · TEFLON PRODUCTS · LAPPING MACHINES · THREAD COMPOUNDS

CRANE PACKING COMPANY
OFFICES IN ALL PRINCIPAL CITIES

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KEEP MACHINES RUNNING

...reduce maintenance costs,

with DEUBLIN ROTATING UNIONS

¾" Size Union Illustrated

for water, steam and air service!

Here is a compact, efficient rotating union—

- ★ LEAKPROOF
- ★ CORROSION PROOF
- ★ EASY TO SERVICE
- ★ VIRTUALLY FRICTIONLESS
- ★ PRECISION BUILT FOR LONGER LIFE
- ★ INTERCHANGEABLE with any other rotating union
- ★ VERSATILE—For Monoflow or Duoflow operation, available in ½", ¾", 1", 1¼" and 1½" sizes
- ★ MINIMUM TORQUE makes it ideal for high speed applications

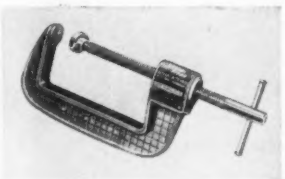
See how this dependable, new rotating joint can reduce inventory of replacement parts because of Deublin's standardization of sizes. Keep "shut downs" from wrecking your production schedules. Pays for itself many times over.

Write today for full details and prices.

DEUBLIN COMPANY
1151 Waukegan Road
Glenview, Ill. (Chicago Suburb)

▲ For more details circle NED-234 F8 on enclosed inquiry slip ▲

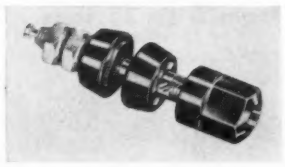
C-CLAMPS
body, nut cavity cast in one piece



Improved line of Rapid Titan quick-acting C-clamps has a double-lead, shallow-cut Acme screw which provides high strength and a permanently mounted Perma-Pad on the screw. Clamp body and nut cavity are cast in one piece, with the nut housing opening from the side instead of from the top. All 90-degree corners are rounded or removed. Made by **Wilton Tool Mfg. Co.**, Dept. NED, 9525 Irving Park Rd., Schiller Park, Ill.

▲ For more details circle NED-235 F8 on enclosed inquiry slip ▲

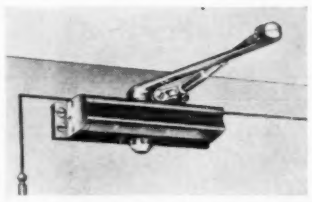
FIVE-WAY BINDING POST
color coded for identification



Flexibility in electrical connection is afforded by this five-way binding post which is made of hard nylon plastic molded over gold-plated brass core and center shaft. Post can be mounted and securely locked in any panel from 1/16 to ¼ in. thick with complete insulation from the panel. Connection can be made by standard ¾-in. banana plug, clip-lead to shaft, wire looped around the shaft and clamped, wire permanently clamped through the center hole, and by clamped spade lug connection. Also, a ⅛-in. flanged tip provides a rigid base for permanent solder connection. Post is rated 30 amp, 1000 v and is available in red, white, blue, yellow, green, and black. Made by **Superior Electric Co.**, Dept. NED, 83 Laurel St., Bristol, Conn.

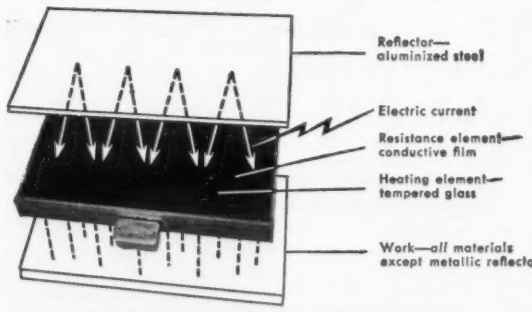
▲ For more details circle NED-236 F8 on enclosed inquiry slip ▲

DOOR CLOSERS
adjust for two closing speeds



Compact horizontal styling and slender silhouette of the 80 Series Century model door closers afford maximum doorway headroom. A full rack and pinion mechanism is used in the surface-applied closer, and a double-ended pinion shaft makes it universal as far as spring and checking action are concerned. Two-speed closing adjustment and adjustable back check are features. Adjustable delayed closing action is available. Size 83 is for 3-ft wide interior doors, 2-ft 6-in. wide exterior door opening out, and for 2-ft 3-in. doors opening in. Size 84 operates 4-ft, 3-ft, and 2-ft 9-in. wide doors in the same respective setups. Made by **Yale & Towne Mfg. Co.**, Yale Lock & Hardware Div., Dept. NED, 11 S. Broadway, White Plains, N. Y.

▲ For more details circle NED-237 F8 on enclosed inquiry slip ▲



Cut drying TIME and COSTS with NEW PYREX® Radiant Heaters

- area source provides uniform heat
- long waves absorbed faster than those from lamps or sheathed units
- accurate temperature control
- mount vertically, horizontally, banked, staggered, or diagonally
- squares, or rectangles —4 sizes

Core of this heater is a tempered *glass* panel coated with an electrical conducting film. Heater comes to you COMPLETE—panel mounted in aluminized steel frame, built-in aluminized steel reflector, mounting hangers, junction box and leads. Here's the answer to putting the *heat* on and getting the most for your money, time and space.

All the facts about PYREX brand industrial radiant heaters summed up in PE-60. Write for your free copy, and the name of distributor in your area.

CORNING GLASS WORKS
56-6 Crystal Street, Corning, N.Y.
Corning means research in Glass

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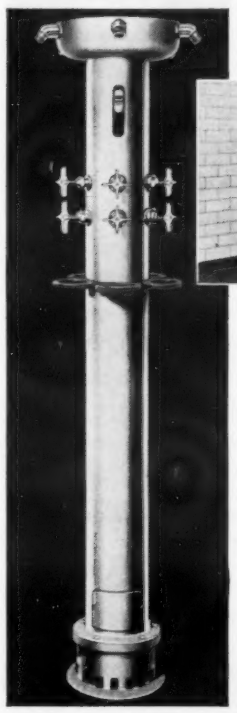
BRADLEY SHOWERS



EACH COLUMN SERVES 5 BATHERS

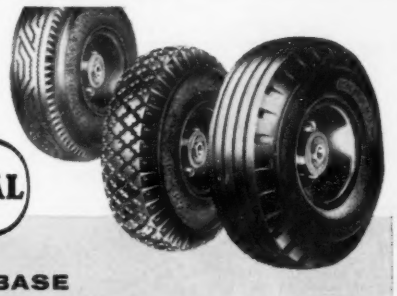
Where shower stall separations are not essential, the Bradley Column Shower offers the lowest cost bathing facilities. One Column provides for five bathers, each with control of water supply and temperature. They are widely used with or without stall partitions and curtains.

Bradley Showers save installation time and cost—3 piping connections instead of 15 required for individual shower stalls for same shower facilities . . . Write for latest edition of Catalog 5601. BRADLEY WASHFOUNTAIN CO., 2253 W. Michigan St., Milwaukee 1, Wisconsin.

BRADLEY multi-stall showers

Distributed Through Plumbing Wholesalers

▲ For more details circle NED-239 F8 on enclosed inquiry slip ▲



THE GENERAL TIRE

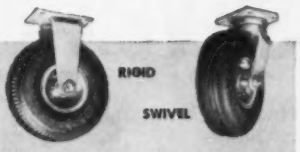
WIDE-BASE PNEUMATICS BY

GENERAL

SAVE TIME, LABOR, MONEY!

Under all job and load conditions, long-wearing General Wide-Base Pneumatics are tops for dependable high-speed performance. Featuring high flotation for easier rolling, they cushion loads and equipment, save high cost floors and floor surfaces, give you greater load capacity. You'll find the exact design you need in General's complete line.

Available separately or in assemblies of tires, tubes and wheels. Size O.D. 8" to 35"—200 to 7890 lbs. capacity for low or high speeds.



CASTER FORKS

Available in identical pairs in a wide range of sizes, these wide-base caster forks are engineered to carry heavier loads without adding dead weight to equipment.

SEND FOR CATALOG, DEPT. 4

THE GENERAL TIRE & RUBBER CO. • AKRON, OHIO

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SEAL RING PROBLEMS SOLVED!

Molded from carbon-graphite materials, Stackpole mechanical seal rings (and mating members) are specifically "tailored" to exactly the right mix for your equipment and its operating conditions. Send details of your application for recommendation by Stackpole engineers.

STACKPOLE CARBON CO.
St. Marys, Pa.

STACKPOLE

"EVERYTHING IN CARBON BUT DIAMONDS"

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NEW! R-9921 POCKET RESPIRATOR

A "bit type respirator" — exceptional in performance, low in price, compact (3" x 3" x 2¾"). Lightweight (4 oz.) Long Service Life. Multiple Protection. Noncorrosive. Practically Indestructible. Easily Dismantled. Easily Sterilized. Has complete inhalation and exhalation valve systems. Replaceable parts if needed. 3 companion models. Any of the 12 filter cartridges used in the AO R-5000 series respirator fit the pocket respirator.

Your nearest AO Safety Products Representative can supply you. Always insist on ® Trademarked Safety Products.

American Optical COMPANY SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS

▲ For more details circle NED-242 F8 on enclosed inquiry slip ▲

Fishing Reels, Hand Saws, Refrigerator Tubing, Cigarette Lighters, Electronic Equipment, Coffee Pots... are just a few of the hundreds of products made

BETTER BY SILVER BRAZING

Handy & Harman Silver Brazing Alloys are being used by almost every industry, to join almost every metal you can think of... with these advantages:

High strength, increased production, corrosion resistance, thermal and electrical conductivity and lower production costs.

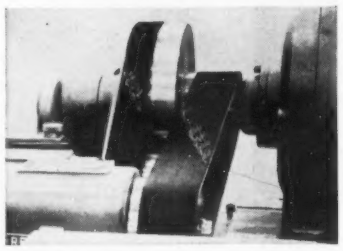
The book that gives you a good picture of silver alloy brazing, its methods and techniques, is Handy & Harman's Bulletin 20. Ask for your copy. Handy & Harman, 82 Fulton St., New York 38, N. Y.

Your NO. 1 Source of Supply and Authority on Brazing Alloys

HANDY & HARMAN
General Offices: 82 Fulton St., New York 38, N. Y.
DISTRIBUTORS IN PRINCIPAL CITIES

▲ For more details circle NED-243 F8 on enclosed inquiry slip ▲

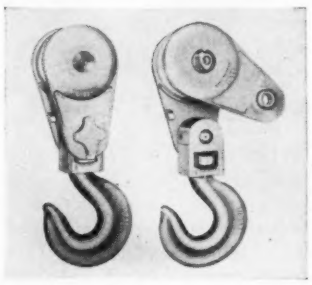
HIGH SPEED BELTS
drive spindles up to 100,000 rpm



Spindles can be driven at speeds up to 100,000 rpm by Hi-Speed No. 400, flat, endless transmission belts. These belts are uniformly constructed to equalize stress; treated to prevent slippage and to resist oil, moisture, and heat; and bonded to minimize internal and surface friction. Less than one-half the stretch of conventional belts is reported. Made by **Globe Woven Belting Co.**, 1414 Clinton St., Buffalo 6, N. Y.

▲ For more details circle NED-244 F8 on enclosed inquiry slip ▲

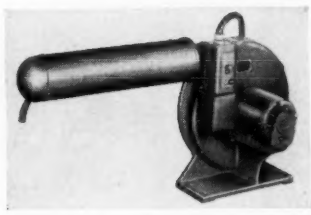
SNATCH BLOCKS
five capacities from 8 to 25 tons



A few hand turns of the yoke pin opens one side plate of Lebus heavy duty snatch blocks for easy placement of the rope on the sheave. When closed, the yoke pin locks to prevent accidental opening. All parts are drop forged, heat treated, high carbon and alloy steels to withstand rough use. Five sizes from 8 to 25 tons capacity are offered with hook or shackle attachment, or with pin only for tailboard use. Made by **American Hoist & Derrick Co.**, Crosby-Laughlin Div., Box 570-A, Ft. Wayne, Ind.

▲ For more details circle NED-245 F8 on enclosed inquiry slip ▲

HEAT BLOWER
temperature at nozzle is 900° F



Constant flow of hot air is delivered at a velocity of 7500 fpm at the ⅜-in. diameter nozzle of this industrial heat blower. It operates continuously at a free-air temperature adjacent to the nozzle of about 900° F. Unit has an 8-in. diameter aluminum fan, and a heavy duty, shock-resistant Calrod heating unit, and stainless steel internal tubes. Blower is designed for stationary bench mounting and has an enclosed housing for protection against dust and dirt. It is driven by a 1/12-hp, low speed, induction motor. Available for 110 or 220-v service, the blower has a switch and pilot light. Made by **United Shoe Machinery Corp.**, Dept. N, 140 Federal St., Boston 7, Mass.

▲ For more details circle NED-246 F8 on enclosed inquiry slip ▲

NEW METHODS FOR REACHING HIGH PLACES *SAFELY...*

Ballymore Mobile Access Lifts

For working easily and safely at levels up to 40 feet above the floor, there's nothing like Ballymore Mobile Access Lifts. These power platform lifts maintain a steady, level position at any location by using levelizing jacks. They are readily portable. When folded, pass through narrow openings, into and out of elevators.

A push-button switch on the guardrail gives the user complete control of the lift. They can be used indoors and out for countless jobs. Write for complete details today.

HYDRAULIC LIFT WORK PLATFORM...

Designed to permit in or outdoor work at levels between 7 and 20 feet. Accommodates up to 3 men. Portable . . . flexible . . . safe.

LOOK FOR THIS LABEL TO BE SURE IT'S THE BEST!

BALLYMORE COMPANY WEST CHESTER, PA. Ballymore

THE BALLYMORE COMPANY • WEST CHESTER 3, PA.

▲ For more details circle NED-247 F8 on enclosed inquiry slip ▲

"WE PREFER CLAUSING VERTICAL MILLS FOR ALL WORK WITHIN THEIR CAPACITIES!"

The new CLAUSING VERTICAL MILLER is the most accurate machine of its type. The spindle head can be swiveled in a vertical plane and set at any angle, and the turret rotated in a horizontal plane making it possible to mill, drill, bore, ream and shape at all angles with one work set-up.

"Our men prefer Clausing vertical mills for all work within their ½" cutter capacity. They're certainly as accurate as larger machines, and they are far more efficient . . . work set-up is easier, they're easier to get around, and they're far more sensitive."

The Progressive Machine and Tool Company

CONDENSED SPECIFICATIONS

Size of Table	6" x 24"
Longitudinal Table Travel	15"
Transverse Table Travel	5"
Vertical Table Travel	11⅝"
Maximum Distance Spindle to Column	8¾"
Quill Travel	3"

Write For Literature

CLAUSING **CLAUSING DIVISION ATLAS PRESS COMPANY**
6-113 N. Pitcher St., Kalamazoo, Michigan

▲ For more details circle NED-248 F8 on enclosed inquiry slip ▲

BUILT BETTER FOR SAFETY FOR COMFORT

Dockson Helmets and Handshields

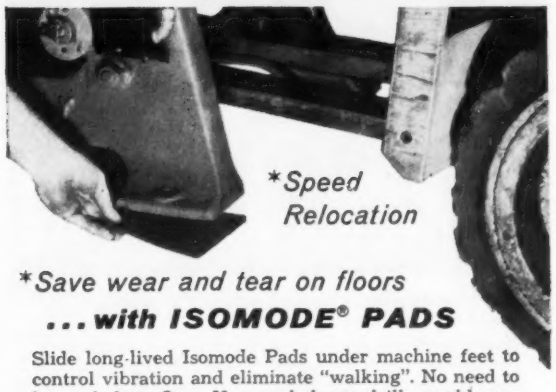
Complete protection against sparks, flash and dangerous rays of arc welding. Federal specification plates. Lightweight, roomy, adjustable, comfortable headgear, spring pivot for positive holding, easy raising and lowering. One-piece, rivet-less formed fibre, built to last.

Write for distributor's name and our catalog of Head and Eye Safety Equipment.

Dockson CORPORATION
3839 WABASH AVE.
DETROIT 8, MICH.

▲ For more details circle NED-249 F8 on enclosed inquiry slip ▲

Moving Machinery?



*Save wear and tear on floors
...with ISOMODE® PADS

Slide long-lived Isomode Pads under machine feet to control vibration and eliminate "walking". No need to lag or bolt to floor. No new holes to drill, no old ones to fill. Isomode Pads soak up shock and vibration, prevent creep, cut down noise.

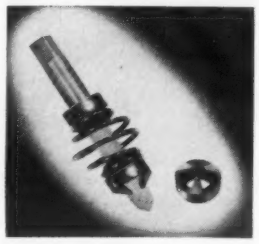
Installation is fast. Just cut sections from the 18"x18" neoprene pad. Figure one square inch per 50 lbs. of machine.

Cost is low. Economy box of 10 pads mounts *80 tons* of machinery. Try Isomode Pads on your next machine relocation and start saving maintenance. Send for data.

MB manufacturing company
A DIVISION OF TEXTRON INC.
1066 State Street, New Haven 11, Conn.

For more details circle NED-250 F8 on enclosed inquiry slip

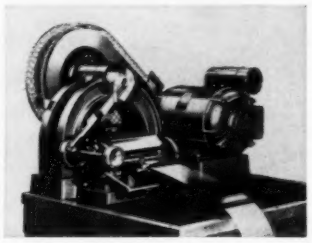
BURRING BIT
fits three-fluted taps



Three - fluted Burr-Bit is available in No. 6 to ½-in. sizes and will fit existing three-fluted taps. Slipped on a tap in seconds, it permits tapping and deburring in one continuous operation. As the tap is withdrawn from the hole, the Burr-Bit removes the first thread that creates the burr, leaving a smooth chamfer. Device may be used with friction type tapping heads or lead screws on single or multiple units and hand tapping fixtures. Practically all metals, plastics, and fibers can be deburred. Made by **Vernon Devices, Inc.**, Dept. NE-5, 481 E. Third St., Mt. Vernon, N. Y.

For more details circle NED-253 F8 on enclosed inquiry slip

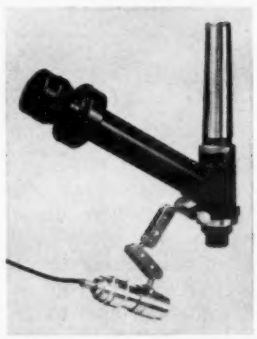
AUTOMATIC POWER PRESS
miniature unit rated at 2½ tons



Open tool height is 4 in. on the Abro miniature automatic power press, driven by a ½-hp motor at a standard speed of 180 strokes per minute. Rating is 2½ tons. The 5 x 8-in. die bed has a 5 x 2½-in. hole, and the crankshaft has a fixed stroke of ½ in. The connecting rod has a length adjustment of ⅝ in. for setting the working height of the upper part of the press tool. A roll feed, operated by an adjustable throw crank, push-feeds up to 5-in. wide stock from the front in increments of up to 3 in. The feed can also be hand operated. Available from **Wharton Unitools**, Dept. PR, Box 202, Valley Stream, N. Y.

For more details circle NED-254 F8 on enclosed inquiry slip

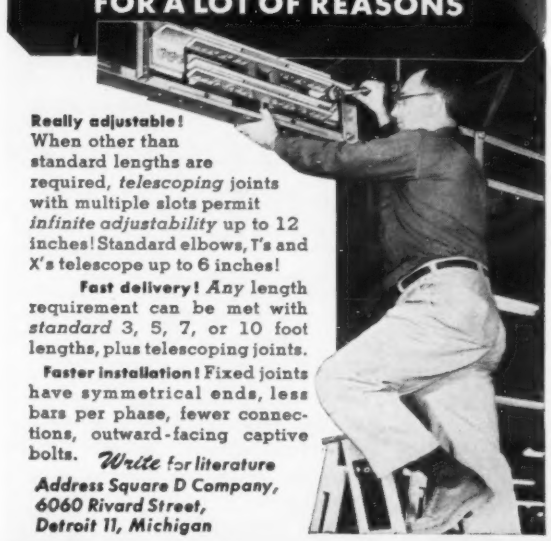
LOCATING MICROSCOPE
for jig borers and similar machines



This Leitz-Wetzlar (West German) locating microscope for jig borers and similar machine tools combines at 25X total magnification a fairly large field with sufficient power of observation. Eyepiece has a hairline cross and is adjustable for individual focusing. Standard shanks are ½-in. straight, and No. 2 and No. 3 Morse taper. A flexible spot illuminator is available with the microscope. Offered by **Opto-Metric Tools, Inc.**, Dept. NED, 137 Varick St., New York 13, N. Y.

For more details circle NED-255 F8 on enclosed inquiry slip

SQUARE D's *New* ADJUSTABLE
ALUMINUM FEED-IN DUCT
FOR A LOT OF REASONS



Really adjustable! When other than standard lengths are required, *telescoping* joints with multiple slots permit *infinite adjustability* up to 12 inches! Standard elbows, T's and X's telescope up to 6 inches!

Fast delivery! *Any* length requirement can be met with *standard* 3, 5, 7, or 10 foot lengths, plus telescoping joints.

Faster installation! Fixed joints have symmetrical ends, less bars per phase, fewer connections, outward-facing captive bolts. *Write* for literature

Address Square D Company, 6060 Rivard Street, Detroit 11, Michigan

NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE
SQUARE D COMPANY

For more details circle NED-256 F8 on enclosed inquiry slip

work in complete safety
with McGILL® grounded portable lamp guards

Concern for the safety of your workers can be completely satisfied with McGill grounded portables. Their exclusive grounding design provides positive protection against shock not available when ordinary guards wear out, contact exposed wires or are shorted internally. Each model built for three wire cord to accommodate a three blade plug and a built in extension outlet for 2 parallel blades and a 3rd U shaped blade for ground. Especially made for rugged industrial service with molded phenolic handles, extra heavy wire cages, the famous LEVOLIER switch and molded in outlet. Switch and outlet optional.

Available from Electrical Wholesalers

No. 5025-SRG
* CONFORM TO NEC
* GROUNDING ADOPTED AS STANDARD BY AMERICAN STANDARD ASSOCIATION
* UNDERWRITER'S LABORATORIES INSPECTED

WRITE FOR YOUR FREE McGILL CATALOG No. 84

YOU CAN DEPEND ON McGILL QUALITY

McGILL MANUFACTURING CO., INC. 151 N. Campbell St. Valparaiso, Indiana

For more details circle NED-251 F8 on enclosed inquiry slip

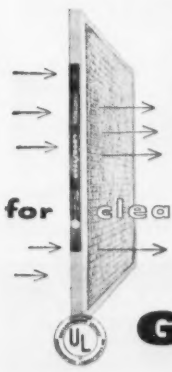
They cut damage from soilage by 20%

Dust and dirt are constant threats in stores, factories and homes alike. And in this big New York store it meant all-too-rapid soilage in the white goods department. In fact, the recurring loss was so great that they decided to replace over 300 ordinary filters with PLIOTRON super-filters.

Results: *Their loss due to soilage of white goods was cut by 20%.* The super-filters remained effective longer. And, when dirty, a quick water rinse restored full filter-power.

For PLIOTRON super-filters are much more than mechanical screens. Depth-loaders—not mere surface-loaders—they capture up to 5 times as many of those fine, hardest-to-catch dirt particles. And fully washable, they're reusable indefinitely.

PLIOTRON super-filters fit standard holders in almost any forced air-heating or air-conditioning system. They're becoming first choice in business and industry the country over. Call your PLIOTRON Distributor—or write Goodyear, P.O. Box 288, Akron, Ohio.



for cleaner air everywhere—
PLIOTRON
AIR FILTER BY
GOODYEAR
THE GREATEST NAME IN RUBBER

Pliotron—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-257 F8 on enclosed inquiry slip

Carpenter

Welded Stainless Pipe gives you the opportunity to make real cost savings at a time when costs are hard to cut...

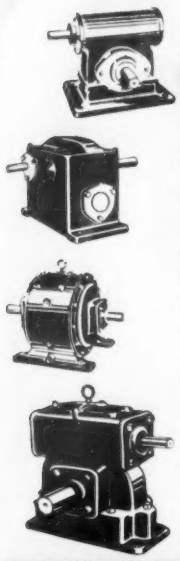
Carpenter Welded Stainless Pipe saves you money in initial cost, but that's only the beginning. Because it's consistently superior in uniformity, Carpenter Stainless Pipe provides operational benefits that increase effective corrosion resistance and give longer service. Schedule 5, 10 and 40 stainless pipe is stocked by your local Carpenter distributor. Our new Selecting and Buying Guide will answer any questions you may have. Write to The Carpenter Steel Company, Alloy Tube Division, Union, N.J.

Carpenter
Stainless Pipe

For more details circle NED-252 F8 on enclosed inquiry slip

Abart SPEED REDUCERS

Designed and Constructed for Continuous Rugged Service



trouble-free, economical drives for any speed reduction need

Compact, precision built Abart units are available in a wide range of models from fractional to 168 hp. ratings, ratios to 10,000 to 1.

Worm, spur and combination gear models—single or double reduction—are supplied in 75 different types and sizes with any desired shaft arrangement.

Write today for Abart's hand pocket size speed reducer catalog.

ABART GEAR and MACHINE CO.

4831 WEST 16th STREET • CHICAGO 50, ILLINOIS

▲ For more details circle NED-258 F8 on enclosed inquiry slip ▲

"We got a new *part time helper in our department...

We either had to strain our guts lifting stuff by hand, or stand around until the big lift truck was free.

* The Boss sure made a smart move when he got an E-Z Hydraulic Lift Table for 'stand by' duty. I'm glad he told everybody that *it's not to leave this department!* It sure is handy to have it here when we need it. I think he's planning on getting one for every department. They must not be too expensive because he usually isn't that 'loose'."

Prices from $195. Capacities to 4000 lbs.
Write for the complete E-Z Lift story.

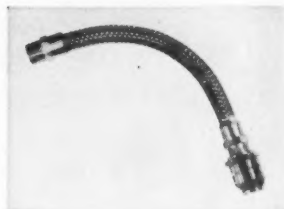
GS-12

CROWN CONTROLS COMPANY, INC.

Washington Street • • New Bremen, Ohio

▲ For more details circle NED-259 F8 on enclosed inquiry slip ▲

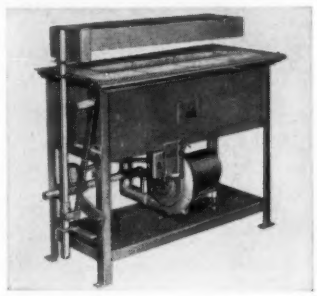
COOLANT NOZZLE
assembled to wire braided hose



This Full - Flo Aerator Coolant Nozzle is designed to deliver a heavy, nonsplash stream of aerated lubricant or coolant. It is furnished assembled to a flexible, all-metal, wire braided armor hose which can be bent to any desired position. Machine end of the assembly has a 3/8-in. NPT solid male coupling. Standard overall assembly lengths are 9, 12, and 15 in. Special lengths and fittings are available, and stop-cocks can be supplied. Made by **Universal Metal Hose Co.**, Dept. NED, 2133 S. Kedzie Ave., Chicago 23, Ill.

▲ For more details circle NED-260 F8 on enclosed inquiry slip ▲

FORGE FURNACE
four burners consume all gas fuels



High heat required for sharpening and forging various parts and tools is provided by the Model 133 forge furnace which burns all types of gases. It has four burners with separate shut-off valves on end burners, and is rated at 370,000 Btu input per hour. Forge body is heavy steel, and the insulated firebox measures 27 x 5½ x 7½ in. Wear surfaces are hard firebrick. The refractory lid mounted on the pivot pole is adjustable. Furnace is 30 in. high and 40 in. long. Made by **Johnson Gas Appliance Co.**, 500 E Ave. N.W., Cedar Rapids, Iowa.

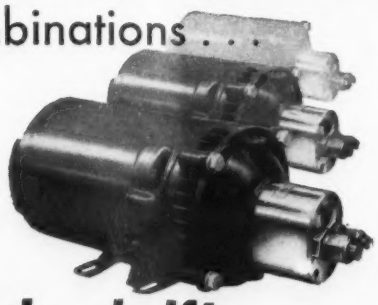
▲ For more details circle NED-261 F8 on enclosed inquiry slip ▲

PRESET TORQUE TOOL
offered in 3/8 or 1/2-in. drive

Accurate tightening in hard-to-reach places to within 2 per cent accuracy is facilitated with this Milbar torque tool. One end of tool fits square drive of standard sockets, while other end fits drive of ratchet or hand wrench. When threaded fastener has been drawn up to predetermined torque, release mechanism in the tool permits 5 degrees free rotation, warning operator that maximum torque has been reached. Tool is offered in 3/8 or 1/2-in. drive and in individual torque ratings from 100 lb-in. to 30 lb-ft. Tool is also usable as a master gage for checking torque wrenches. Made by **Milbar Corp.**, Dept. N, 1900 Euclid Ave., Cleveland 15, Ohio.

▲ For more details circle NED-262 F8 on enclosed inquiry slip ▲

129 CUSTOM
hydraulic pump and motor combinations . . .



off the shelf!

Here are power sources for any hydraulic application. Commercial, military, and aviation research have developed this array of standard pump and motor combinations.

With a performance range from .1 to 5 G.P.M. at pressures to 2000 P.S.I., you can expect a stock power source that fits your requirements. Many types of motors offer a choice of electrical characteristics, and are drip-proof, totally enclosed, or have explosion-proof enclosures as required.

When you need custom equipment, call on Eastern and discover how this adaptable line of hydraulic pumps and motors fills the bill without research expense by you.

For full performance data on pump and motor combinations, write for new Bulletin 810-X.

Eastern INDUSTRIES, INC.

100 SKIFF ST., HAMDEN 14, CONN.

▲ For more details circle NED-263 F8 on enclosed inquiry slip ▲

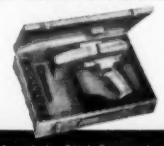
SKILMANSHIP • SKILMANSHIP • SKILMANSHIP

NEW

all-purpose
SKIL IMPACT WRENCH

Dozens of Uses in Plant Production and Maintenance

New SKIL Model 823 Impact Wrench sets nuts from 3/8" to 1 1/16" at 2000 impacts per minute. Collet chuck quickly adapts it for drilling in metal or wood. Or use it as a screw driver, to tap holes, to drive a hole saw or as a wire brush. Contour-grip handle allows one-hand operation. Will not twist in the hand under torque. Tool cannot reverse while running. Invite your SKIL distributor to prove the many ways you can use this new Model 823 SKIL Impact Wrench.



Model 824 Impact Wrench Kit. Contains Model 823 above and these accessories: 1 Universal Joint; 1—5" Extension Bar; 6 Hexagon Sockets from 1/2" to 13/16" plus sturdy steel case.

Made only by SKIL Corporation, manufacturer of famous SKIL and SKILSAW products. 5033 Elston Avenue, Chicago 30, Illinois. In Canada: 3601 Dundas Street West, Toronto 9, Ontario.

SKIL

▲ For more details circle NED-264 F8 on enclosed inquiry slip ▲

ANOTHER PANNIER MASTER MARKER!

PANNIER'S STEEL LETTERS • FIGURES

- Longer lasting, less mushrooming
- Better impressions—clear, clean
- Letters, figures, or symbols
- In sets, assorted, or singly

Pannier Tested Steel Stamps provide you with clear, clean markings, maximum safety, longer life and highest quality.

BIRTHMARKED MATERIALS

Write for data. Wide variety of sizes available.

MARKING DEVICES

THE PANNIER CORPORATION

301 Sandusky Street • Pittsburgh 12, Pa.

Offices: Los Angeles • Chicago • Cleveland • Philadelphia • Birmingham

▲ For more details circle NED-265 F8 on enclosed inquiry slip ▲

UNLIMITED OPPORTUNITIES
for saving money in heat transfer operations

High heat transfer efficiency, low cost, light weight and compact design make Tranter Platecoil the easiest, best and most economical answer to a wide range of heat transfer problems in industry. Platecoil replaces pipe coil and saves engineering, fabricating, installation, operation and maintenance costs while giving more satisfactory performance.

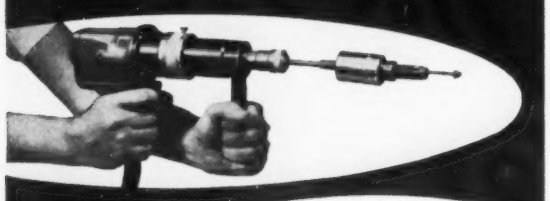
SEND FOR FREE BULLETIN P57.

TRANTER MANUFACTURING INC.
LANSING MICHIGAN

PLATECOIL® DIVISION

▲ For more details circle NED-266 F8 on enclosed inquiry slip ▲

Now—ELLIOTT
Air MAGNETIC Controls
for tube expanding in hazardous locations



fast efficient easy to handle

Brings new concept of torque control to tube expanding. Based on operation of two magnets which results in instantaneous engagement and disengagement between air motor driver and driven expander. Calibrating dial permits exact settings for torque control. Trigger-controlled motor runs forward or reverse. Control and expanders fit in metal case. Write Elliott Company, Lagonda Division, Springfield, O., for Leaflet Y-47.

Y7-3

ELLIOTT Company

For more details circle NED-267 F8 on enclosed inquiry slip

Out where the going is toughest . . .
YOU'RE GLAD YOU CHOSE BOSTON HOSE!

BOSTON stands out because it stands up!

BOSTON HOSE

WHATEVER YOUR HOSE NEEDS, THERE'S A BOSTON HOSE FOR YOU!

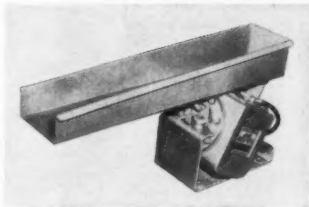
BOSTON

BOSTON WOVEN HOSE & RUBBER COMPANY
DIV. OF AMERICAN BILTRITE RUBBER CO., INC.
BOSTON 3, MASS

INDUSTRIAL HOSE · BELTING · V BELTS · PACKING · MATTING · TAPE

For more details circle NED-268 F8 on enclosed inquiry slip

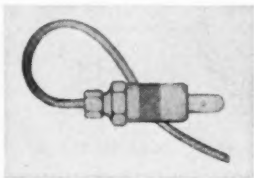
VIBRATORY FEEDER
heavy duty 4-tons-per-hour unit



Conservatively rated at 4 tons per hour, the Model V3B-40A Hi-Vi vibratory feeder has an electro - permanent magnet drive, and operates on alternating current. Coupled with disc-type glass fiber springs, the drive system affords a controlled delivery of material with densities ranging from 40 to 150 lb per cu ft. A compact base permits mounting the quiet-operating feeders side by side, back to back, or in tandem. Drive element is totally enclosed for protection from dust and moisture. Made by **Eriez Mfg. Co.**, 1325 E. 12th St., Erie 6, Pa.

For more details circle NED-270 F8 on enclosed inquiry slip

AIR POPPET VALVE
energizes pilot-operated valves



Actuated by hand or by some direct or remote mechanical means, the Pulse-Air poppet valve is used as an energizing medium for pilot-operated air control valves. It opens and closes only when the plunger is compressed, making it unnecessary to decompress the plunger before the control valve is energized in the opposite direction. Applications include air-operated automatic machine tool equipment. Made by **Lithibar Co.**, Dept. 10A, 345 W. 14th St., Holland, Mich.

For more details circle NED-271 F8 on enclosed inquiry slip

PLASTIC-STEEL CARBOY
in 13 and 14-gal sizes

A polyethylene inner container and a steel drum outer jacket comprise the JALboy shipping container for corrosive chemicals. Standard weight 14-gal size has $5\frac{3}{4}$-lb inner container, whereas the heavy duty 13-gal size has an $8\frac{3}{4}$-lb container. The JALboy weighs only 23 lb. Exterior of steel container is coated with phenolic to resist corrosive atmospheres and spillage. Cover is available with 8 to 12-mil PVC coating. Neck and cap of polyethylene container protrude through $4\frac{1}{2}$-in. diameter curled and gasketed opening in steel drum. This outer drum is replaceable. Sold by Plax Corp. distributors and the **Jones & Laughlin Steel Corp.**, Container Div., Dept. 456, 3 Gateway Center, Pittsburgh 30, Pa.

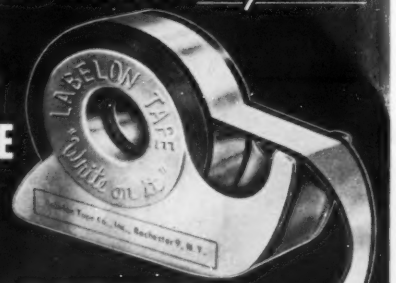
For more details circle NED-272 F8 on enclosed inquiry slip

THE "Write" LABEL... Anywhere!

WON'T SMUDGE

RESISTS: DIRT GREASE WATER ACIDS

STICKS WITHOUT MOISTENING



LABELON PLASTIC TAPE

Write on it

Use Labelon "Write on it" Tape to label stockroom shelves, bins, tools, hard-to-mark parts; for indicating rejects and service department repairs; for marking laboratory equipment, supplies, experiments; for panel boards or wiring; for office files, folders, etc.

For samples and prices, see your dealer or write Dept. NED-6

LABELON TAPE CO., INC.
450 Atlantic Ave., Rochester 9, N. Y.

For more details circle NED-273 F8 on enclosed inquiry slip

Accidents cost more than

ALCOA ABRASIVE TREAD PLATE

An employee slips on a greasy floor and twists his knee. A severe, chronic inflammatory condition results. Medical costs and Workmen's Compensation total $10,553.77. The employer's accident rate is up. Production time is lost while a new man is trained.

This is just one of 20,000 avoidable slipping accidents in industry every year. Alcoa® Aluminum Abrasive Tread Plate with lasting slip-proof qualities prevents such accidents. Tough particles of fused aluminum oxide in its abrasive surface stay slip-proof even when wet, oily or greasy. It is the only nonskid floor surface that gives you the advantages of corrosion resistance and light weight.

Learn how you can eliminate hazardous conditions on floors, stairs, ramps and other areas. Check the coupon below; write Aluminum Company of America, or call your nearest Alcoa distributor.

Make Your Own 30-Second Safety Test . . . Check the Coupon for FREE Sample of Alcoa Aluminum Abrasive Tread Plate.

Alcoa Abrasive Tread Plate gives a safe, sure grip—even when wet, oily or greasy.

ALCOA ALUMINUM

Your Guide to the Best in Aluminum Value

"ALCOA THEATRE"
Exciting Adventure, Alternate Monday Evenings

Aluminum Company of America
1668-F Alcoa Building
Pittsburgh 19, Pennsylvania

I'd like to see how Alcoa Abrasive Tread Plate prevents slipping. Please send me FREE sample—also application, design and fabricating data.

Name and Title _____
Company _____
Address _____
City and State _____

For more details circle NED-274 F8 on enclosed inquiry slip

Capacity of storage areas like that on the left can be greatly increased with BAND-BOXES. Special palletized bottom keeps them neatly and safely stacked.

How to increase storage capacity in less space with BAND-BOX
Patent applied for

Because they're designed for safe, neat stacking, BAND-BOXES can solve almost any storage problem. With an effective capacity of approximately 4,000 lbs., each BAND-BOX can support static loads up to 16,000 lbs. to minimize the storage area required.

Even *empty* BAND-BOXES save space. They're quickly "knocked-down" and 12 nested boxes take the same cubic area as a single assembled unit.

BAND-BOXES ARE IDEAL SHIPPING CONTAINERS AS WELL! Available with either Stack Lock Corners for open shipping or full top for maximum protection, BAND-BOXES are lightweight, yet very tough reusable containers for both intra- and inter-plant shipments.

See how Ackermann BAND-BOXES can economically solve storage and shipping problems. For complete information write to the Ackermann Manufacturing Company, subsidiary of Wheeling Steel Corporation, Wheeling, West Virginia.

WHEELING STEEL

IT'S WHEELING STEEL

For more details circle NED-269 F8 on enclosed inquiry slip

Cut fastening costs with PASLODE STAPLERS

On production lines: Used profitably in nearly every industry in manufacturing, assembly and shipping. Fasten wood, cloth, aluminum, hardboard, screen cloth, plywood and hard fibreboard.

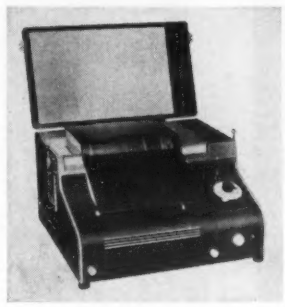
In shipping rooms: Use to assemble cartons, drums, packing fillers, liners, etc.; to close bags, drums, corrugated containers; to fasten shipping tags, assembly instructions, moisture collectors.

There's a dependable Paslode hand or pneumatic stapler to help you cut costs. Send for description and prices today.

PASLODE COMPANY
Division of Signode Steel Strapping Company
5860 Northwest Highway, Dept. ED, Chicago 31, Ill.

For more details circle NED-275 F8 on enclosed inquiry slip

BOOK PHOTOCOPY MACHINE combines an exposer and printer

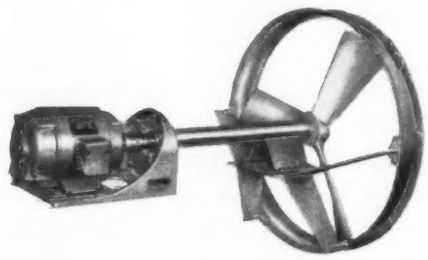


Perfect black-on-white copies of any original written or printed page in single sheets or directly from books can be made by the improved Copease Duplex Book Copier. Sponge rubber-cushioned head adjusts to thickness of book to assure uniform contact and even pressure on copy surface. Machine combines an exposer and printer in a single unit, and it has a built-in positive and negative paper dispenser. It will copy work up to 8½ x 14 in. and pick up all print; pen, pencil, or crayon writing; and spirit duplications. Improved automatic timer assures proper exposure, after which negative is run through built-in developing unit. Made by **Copease Corp.**, Dept. N, 425 Park Ave., New York 22, N. Y.

For more details circle NED-277 F8 on enclosed inquiry slip

EXTENSION SHAFT FANS with shafts from 16 to 66 in. long

Line of axial flow extension shaft fans is intended for hood or tank exhaust, spray booth exhaust, oven recirculation, and other installations where fan motor



must be isolated from air stream. The Type CE fans are nonoverloading and thus suitable for wide operating range from free air to 1½-in. static pressure. Available in various multiblade designs, fans have oversize drive shaft and bearing assemblies for long life, and corrosionproof motors. Nine diameters range up to 60 in. and have air deliveries up to 79,000 cfm. Shafts range from 16 to 66 in. long. Made by **Robbins & Myers, Inc.**, Propellair Div., Dept. C, 1345 Lagonda Ave., Springfield 99, Ohio.

For more details circle NED-278 F8 on enclosed inquiry slip

Marking Machines for Electronics Products

Markem Machine Co.—Twenty-five machines designed expressly for marking items ranking from transistors and 110-degree TV tubes to instrument scales and spaghetti tubing are detailed in 8-page catalog. Its title is "Markem Machines for Marking Components, Parts, Products, and Packages of the Electrical and Electronic Industries."

For more details circle NED-279 F8 on enclosed inquiry slip

a good team for steam

This Yarway team has scored high—over a million installed on all types of steam equipment. Stocked and sold by 270 Industrial Distributors. For free Steam Trap Book, write YARNALL-WARING CO., 131 Mermaid Ave., Philadelphia 18, Pa.

go YARWAY with confidence

For more details circle NED-276 F8 on enclosed inquiry slip

ONLY ONE MOVING PART on this Bin Vibrator

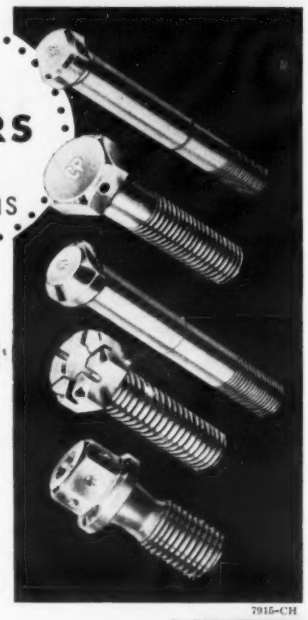
That's the secret of the Cleveland Air Vibrator record of low maintenance costs. There's little to wear out. A simple mechanism, manufactured to precision standards, and subjected to exacting inspection. There just isn't a better combination for a long, trouble-free life. Write for complete information.

Air or Electric
Portable or Permanent
Noiseless or Standard

THE CLEVELAND VIBRATOR CO.
2744 K6 Clinton Avenue • Cleveland 13, Ohio

For more details circle NED-280 F8 on enclosed inquiry slip

precision metal **FASTENERS** to your specifications



Chandler makes "precision" a reality . . . not just a "catch word". Here's how . . . constant production control assures high quality fasteners with the ultimate in uniformity, accuracy . . . and economy. Chandler's rigid inspection standards mean you get fasteners that provide maximum resistance to stress, vibration and shear. For over 25 years Chandler has supplied the automotive, engine and aircraft industries with . . .

- Self-Locking Place Bolts
- Connecting Rod Bolts
- Automotive Special Bolts
- Special Aircraft Engine Bolts
- "AN" Aircraft Engine Bolts
- "NAS" Aircraft Bolts

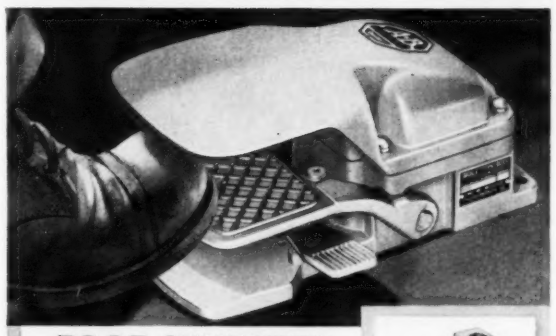
If you're looking for fasteners to meet your very special requirements, write us today.

7915-CH

Write today for Bulletin 1264-CH

CHANDLER PRODUCTS CORPORATION
1495 Chardon Road • Cleveland 17, Ohio

For more details circle NED-281 F8 on enclosed inquiry slip



FOOT SWITCHES THAT ARE REALLY RUGGED!

Designed for the toughest service, Bulletin 805 foot switch has a die cast aluminum housing. Extended base prevents tipping. Maintenance free, double break, silver alloy contacts. Trip point is adjustable. Available in NEMA Type 4 and 7 enclosures.

Allen-Bradley Co.
1334 S. Second St., Milwaukee 4, Wis.
In Canada: Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY MOTOR CONTROL QUALITY

For more details circle NED-282 F8 on enclosed inquiry slip

everything you need— to fasten **anything** with screws

APEX SCREWDRIVING TOOLS

Apex builds tools to drive all these types of screws. For most applications, you can choose the correct Apex tools from the most complete line ever offered. For special applications, just ask Apex—the authority on fastening—for practical assistance in solving your problem.

Catalog 21— Apex Screwdriving Tools

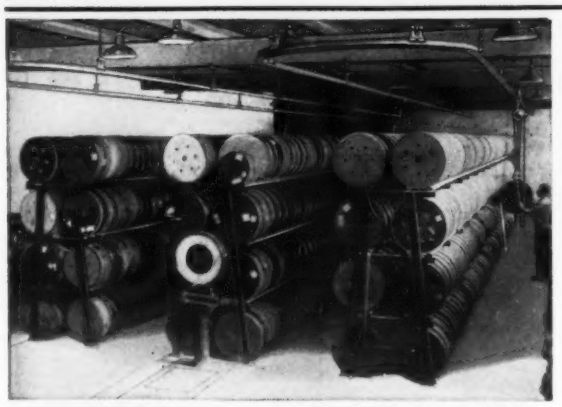
Catalog 25— Magnetic Screwdriving Tools

1933 • A Quarter Century of Service to Industry • 1958

Ask **APEX** *for the answer to your fastening problem!*

THE APEX MACHINE & TOOL COMPANY
1046 S. Patterson Blvd., Dayton 1, Ohio

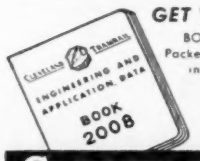
For more details circle NED-283 F8 on enclosed inquiry slip



STORING AND HANDLING 1728 REELS

The three racks shown above are 63 feet long and will accomodate 576 reels per row or a total of 1728 reels. This number of 24" reels will store 300,000 pounds of wire.

The reels are taken to or removed from the racks by means of a Cleveland Tramrail overhead rail system with easily operated chain hoists and special reel grabs. Each reel space is numbered and each reel is weighed before placing on racks, which makes keeping a perpetual inventory easy.



GET THIS BOOK! BOOK No. 2008 Packed with valuable information...

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6620 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

▲ For more details circle NED-284 F8 on enclosed inquiry slip ▲

Do you have a ladder in your plant?

What industrial plant . . . no matter how large or small . . . doesn't have a ladder? Now...the Dillon Dynamometer offers a quick and easy way to check *your* ladders . . . to be *absolutely certain* the rungs are safe . . . to insure *your employees'* safety!

Ladders are but one of hundreds of types of plant equipment tested daily by safety-conscious plants with portable, lightweight Dillon Dynamometers. Available in 13 capacities from 0-500 to 0-100,000 lbs., these ruggedly constructed precision instruments are individually calibrated, protected against accidental overload, equipped with red max. pointer, unaffected by temperature . . . *unconditionally guaranteed!* Write today for price list and free literature, showing Dillon Dynamometers in action.

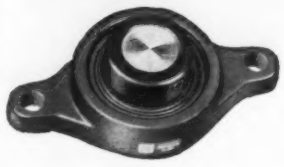
Inexpensive block and tackle applies load to each rung with Dynamometer interposed between. Readings are direct in pounds. Results are positive, accurate, rapid.

W. C. Dillon & COMPANY, INC.
14578NE Keswick St. Van Nuys 1, California

▲ For more details circle NED-285 F8 on enclosed inquiry slip ▲

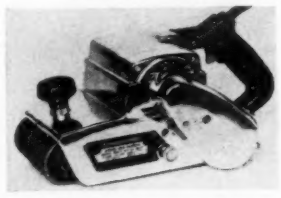
FLANGE BLOCKS
have unbreakable malleable housings

Use of malleable housings on FB210 Series of two-bolt flange blocks virtually eliminates block breakage. Blocks are offered in 16 sizes for ½ to 1 7/16-in. shafts. The compact units require a mounting space from 1 15/16 x 3 13/16 in. to 3 3/8 x 6 3/16 in., according to the block size. Lateral dimensions range from 1 19/64 to 1 11/16 in., according to model. The B200 bearings are sealed for life, have standard dimensions, and have an operating range of −40 to 225° F. Flange prices range from $6.30 to $10.45. Made by **Browning Mfg. Co.**, 1940 Browning Dr., Maysville, Ky.



▲ For more details circle NED-287 F8 on enclosed inquiry slip ▲

ELECTRIC BELT SANDER
belt speed is 1250 sfpm under load



An extra large 4 x 24-in. abrasive belt adapts this Model 564, continuous duty, electric hand sander for production finishing. Cork and steel shoe provides a 22-sq in. surfacing area. Sander has a 9-amp motor, nonslip rubber timing belt drive, single-knob tracking adjustment, extra-large air vents, tensioning device for quick belt changes, and a steel wear plate. Belt speed is 1250 sfpm under full load. Sander weighs 13 lb and comes with an assortment of six abrasive belts. Belts are available to sand woods, grind metal or plastic; bevel glass; and surface metal sheets, tile, and other compositions. Made by **Porter-Cable Machine Co.**, 123 Exchange St., Syracuse 4, N. Y.

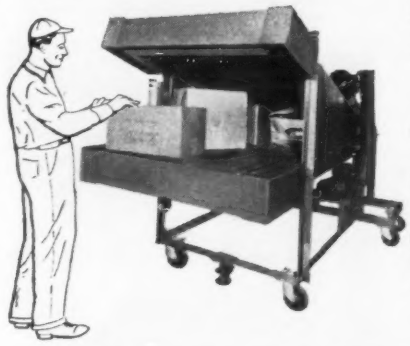
▲ For more details circle NED-288 F8 on enclosed inquiry slip ▲

HYDRAULIC RAM PACKING
molded as a single, endless ring

Endless and jointless MonOseal single ring packing for hydraulic rams is molded of synthetic compounds, and is impervious to water, oil, and oil solvents. Flared lip construction assures a good seal, even at low pressure. The thick top withstands hydraulic shock without distortion. It can be installed in any depth stuffing box from 1½ in. up. Coating of fabric prevents packing from swelling and binding the ram. Operation is at any hydraulic pressure. Made by A. W. Chesterton Co., 8 Ashland St., Everett 49, Mass.

▲ For more details circle NED-289 F8 on enclosed inquiry slip ▲

The "MAW" that Collapses and Shreds anything that belongs in a paper bale!



Specifications:
Floor space required: 68"x97"
Net weight 4,700 lbs.
Shipping weight 5,000 lbs.
Knives powered by heavy-duty, 15 h.p., 3 phase, 60 cycle motor—220 or 440 volts.
Individual motors for crusher belts.
Reversing switch on belts and knives.
For continuous operation as fast as one man can feed.

Costly labor to prepare boxes for shredding is unnecessary with the Silver "40 A". Cartons and paper boxes are both crushed and shredded for simplified baling.

Shredded material can be fed directly into baler or carried away by pneumatic or conveyor system.

Send for complete information about the Silver "40 A" (one of 11 models) today.

Industrial Shredder and Cutter Company
107 MILL ST. • SALEM, OHIO, U. S. A.

▲ For more details circle NED-290 F8 on enclosed inquiry slip ▲

B.F.Goodrich

Pneumatic tires?

Solid tires?

Free B.F.Goodrich TW Analysis tells you which tires are right for your job!

Can save you up to 50% on industrial tire costs!

Do you need a pneumatic or solid industrial tire? What tread design—what tread compound—is best for your materials handling work? The FREE B.F.Goodrich Tire and Wheel Analysis gives you the answers. They're answers that can save you up to 50% on industrial tire costs, up to 20% on maintenance.

Just mail the coupon below. Without cost or obligation, a B.F.Goodrich TW Analysis man will study your hauling surfaces, equipment, loads and other problems. Then he'll recommend the *right* industrial tires for you to use. His recommendations are unbiased, because B.F.Goodrich makes a complete line of industrial tires.

Mail the coupon *today!* A special consulting service is available to manufacturers of materials handling equipment.

Specify B.F.Goodrich tires when ordering new equipment

B.F.Goodrich Smileage!

B.F.Goodrich Tire Company
A Division of
The B.F.Goodrich Company
Department TW-704,
Akron 18, Ohio

I would like further information on your FREE TW Analysis.
NAME_____
COMPANY_____
STREET_____
CITY_____ ZONE____ STATE____

B.F.Goodrich tires ● The B.F.Goodrich Company

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LOWER COST Dust Collection AT HIGHER EFFICIENCY

Greater gas flow per tube, fewer tubes per collector, lower pressure loss — this means lower total cost for a given capacity and efficiency. • Before you buy, write for Bulletin CY, which shows how you can cut dust collecting costs with Cyclo-trell mechanical collectors.

RESEARCH-COTTRELL

RESEARCH-COTTRELL, INC. • Main Office and Plant: Bound Brook, N. J. • 405 Lexington Ave., New York 17, N. Y. • Grant Building, Pittsburgh 19, Pa. • 228 N. La Salle St., Chicago 1, Ill. • 58 Sutter Street, San Francisco 4, Cal. • Research-Cottrell (Canada) Ltd., 33 Bloor Street East, Toronto 5, Ontario.

RC182

▲ For more details circle NED-286 F8 on enclosed inquiry slip ▲

ANOTHER BROOKS ROTAMETER first

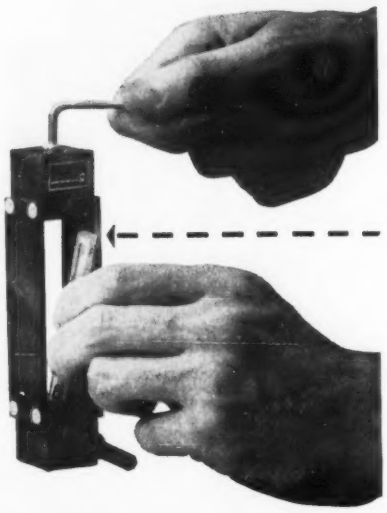
"SLIP-OUT" Metering Tubes simplify flow measurement

Thousands of installations since 1953 prove the practical simplicity of the Brooks "Slip-Out" metering tube.

Just a turn of the sealing plug permits the tube to be lifted out . . . for quick cleaning or an instant change in flow range. O-ring seals eliminate stuffing boxes . . . reduce possibility of breakage.

Available in low-flow purge flow meters and larger sizes to 2".

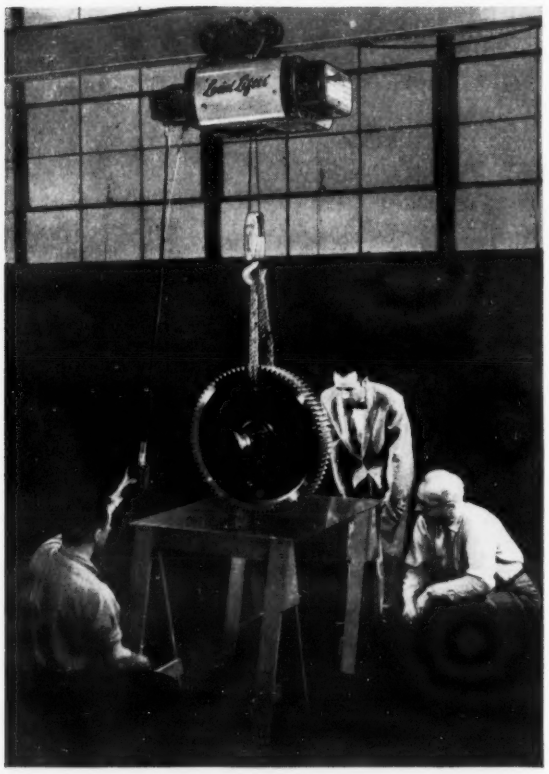
Write for Bulletin 120.



BROOKS ROTAMETER COMPANY
658 D STREET
LANSDALE, PA.

SA 1734

▲ For more details circle NED-292 F8 on enclosed inquiry slip ▲



CONTROL SO ACCURATE YOU CAN EVEN SPOT A LOAD ON GLASS . . . SAFELY!

To demonstrate that the double braking system on the Load Lifter Electric Hoist does stop loads instantly, we set up this "glass test." Time after time, the hoist operator spotted the load on the fragile window glass without breaking it! The separate load and motor brakes operate simultaneously. Each alone can hold the capacity load.

Fast, accurate spotting with no drift or backdrop is a must in handling all kinds of loads. Load safety and production economy demand it — the Load Lifter Hoist assures it. Convince yourself. See one doing actual production work. Call your Shaw-Box Distributor and ask him to arrange for a demonstration in a nearby plant. Or, write us for details about safe 24-volt push-button control, low headroom, choice of suspensions, "in-the-air" serviceability and other features of Load Lifter Wire Rope Electric Hoists. Single and 2-speed models available in 1 to 15 tons.

58FG-1

MANNING MAXWELL & MOORE INC. M&M TRADE MARK

'Load Lifter'® ELECTRIC HOISTS

MANNING, MAXWELL & MOORE, Inc.
SHAW-BOX CRANE & HOIST DIVISION
400 West Broadway • Muskegon, Michigan

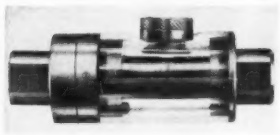
Builders of "SHAW-BOX" and 'LOAD LIFTER' Cranes, 'BUDGIT' and 'LOAD LIFTER' Hoists and other lifting specialties. Other Divisions produce 'ASHCROFT' Gauges, 'HANCOCK' Valves, 'CONSOLIDATED' Safety and Relief Valves, and 'AMERICAN' and 'AMERICAN-MICROSEN' Industrial Instruments.

IN CANADA: *Manning, Maxwell & Moore of Canada, Ltd., Avenue Road, Galt, Ontario.*

▲ For more details circle NED-293 F8 on enclosed inquiry slip ▲

AIR TOOL LUBRICATOR

mounts directly behind tool



Automatic lubrication with less than 5 per cent power loss is provided by the New-Matic Jet Flow air tool lubricator. It weighs less than 6 oz filled with oil and is mounted directly behind the tool. Swiveling connectors keep the air supply line from tangling. Both intermittent and continuous air flows are lubricated evenly. Tamperproof adjustments are made externally under full line pressure to lubricate from 0 to 60 cfm of free air. Suited for use on staplers, tackers, and small air cylinders, it is available in sizes for ½, ¼, and ⅜-in. pipe. Made by **Comet Equipment Co.**, Dept. ED-1, 2578 Harney St., Omaha, Nebr.

▲ For more details circle NED-294 F8 on enclosed inquiry slip ▲

CELLULOSE SPONGE WIPERS

for general washing applications

Latest addition to company's line of cotton, synthetic, and cellulose products is Zelincloth, a fine cellulose sponge wiper. Sponge is tough, soft when wet and will not scratch surfaces. It is used for general washing, wiping surfaces, washing walls and windows, and cleaning appliances and equipment. Four colors are available. Made by **Zelinkoff Co.**, Dept. D, Wichita 1, Kans.

▲ For more details circle NED-295 F8 on enclosed inquiry slip ▲

ZIPPER-EQUIPPED TAPE

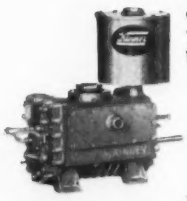
wraps and zips around wires, cables

Highly elastic vinyl compound now used in general purpose Zippertubing increases the pull strength at the closure point by 100 per cent over former type. The flat vinyl tape is wrapped around wires, cables, ducts, pipelines, and similar objects, then zipped shut. Increased flexibility provides a tightly fitting, neat appearing jacket. Embossment on one side assures a tight grip on wires and cables by the jacket. Vinyl compound withstands temperatures from −65 to 221° F. Tubing is made in widths from ⅜ in. up in ⅛-in. increments, continuous lengths to 750 ft, four wall thicknesses, and black and clear colors. Made by **Zippertubing Co.**, 752 S. San Pedro St., Los Angeles 14, Calif.

▲ For more details circle NED-296 F8 on enclosed inquiry slip ▲

Is Your Research Hampered by Outdated Vacuum Equipment?

Developments in KINNEY High Vacuum Equipment are extensive and dramatic. They must be to keep abreast of today's accelerated research. For your laboratory and pilot plant, look to —

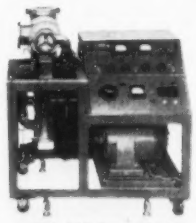


KINNEY High Vacuum Pump

Kinney®
HIGH VACUUM

KINNEY High Vacuum Pumps provide you with the most comprehensive selection in the world . . . Single-Stage and Two-Stage Mechanical Pumps and the famous KINNEY Two and Four-Stage Mechanical Booster Pumps.

KINNEY Packaged Pumping Systems, consisting of Cold Trap, high speed Fractionating Diffusion Pump, two-stage gas-ballasted mechanical Vacuum Pump and complete instrumentation forms an attractive highly versatile laboratory tool. Unique manifold valve arrangement, whereby the intake fitting may be rotated through 90°, quickly converts unit into a highly efficient Vacuum Evaporator unit.



PW-400 Packaged Pumping System

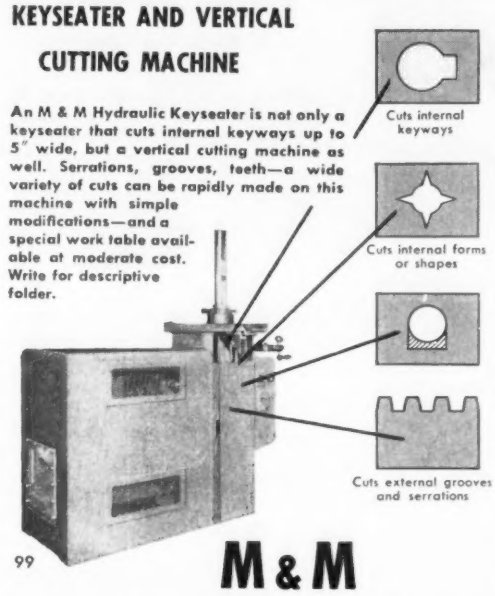
Write for Bulletins V-54 and 804.

KINNEY MFG. DIVISION
THE NEW YORK AIR BRAKE COMPANY
3612F WASHINGTON STREET • BOSTON 30 • MASS.

▲ For more details circle NED-297 F8 on enclosed inquiry slip ▲

TRIPLE THE USEFULNESS OF YOUR M&M KEYSEATER AND VERTICAL CUTTING MACHINE

An M & M Hydraulic Keyseater is not only a keyseater that cuts internal keyways up to 5" wide, but a vertical cutting machine as well. Serrations, grooves, teeth—a wide variety of cuts can be rapidly made on this machine with simple modifications—and a special work table available at moderate cost. Write for descriptive folder.



99

M & M

KEYSEATERS AND VERTICAL CUTTING MACHINES

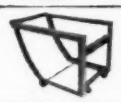
MITTS & MERRILL • 1000 So. Water St. • SAGINAW, MICH.

▲ For more details circle NED-298 F8 on enclosed inquiry slip ▲

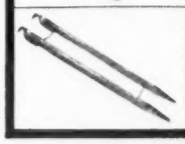
NOW, FASTER SAFER HANDLING

of your Barrels and Drums

Fairbanks Fig. 9090 Barrel Truck
Specifically designed for safer handling of barrels and drums of any height. Barrels and drums loaded and unloaded without ever being touched by the operator. Load balanced over and ahead of wheels to reduce operator's burden and improve maneuverability. Narrow all steel pipe frame — welded assembly.



Fairbanks Fig. 51 Barrel Stand
Permits one man to safely rock full drum into drain position, then provides mobility and convenience for handling, storing and draining steel drums.



Fairbanks Type 228 Barrel Skids
For sliding barrels, drums, kegs or cases from one level to another. Eliminates danger of dropping. Very handy for unloading and loading railroad cars and motor trucks. Available in 7, 8, 10 and 12 foot lengths.

Yours On Request: Truck Catalog, complete with details and specifications on Fairbanks two-wheel and platform trucks. Fully illustrated. Without obligation, write for your free copy today.

THE FAIRBANKS COMPANY
393 Lafayette Street, New York 3, New York
Branches: New York 3 • Boston 10 • Pittsburgh 22 • Rome, Georgia
Casters • Wheels • Trucks • Valves • Dart & "Pic" Unions

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New and Improved . . . "SEALINE" THERMO-PLASTIC HAND SEALER

For Polyethylene—Pliofilm and Others

- **"Teflon" coated roller eliminates intermediate material or liquid—Seals direct.**
- **Now available for 220 Volts. AC or DC—110V or 220V.**

$23.90 F.O.B. CHICAGO

- For fast, flat sealing—straight or irregular shapes.
- Seals direct—no intermediate material required.
- Accurate adjustable heat control—200° to 450° F.
- Easy to handle—weighs less than 1 lb.

Order direct or write

SEALINE MFG. CORP.
4720 W. Lake St., Chicago 44, Illinois

▲ For more details circle NED-300 F8 on enclosed inquiry slip ▲

Drill Hardened Steels without Annealing—

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK DRILL COMPANY, INC.
1380 East 222nd St. • Cleveland 17, Ohio

"HARDSTEEL"

▲ For more details circle NED-301 F8 on enclosed inquiry slip ▲

IT'S EASY TO STRIP OFF PAINT

and Solve Your Stripping Problems with—

EPOXYSTRIP

PAINT STRIPPER—Saves Time and Money!

A new more powerful paint stripper that outstrips all others! No organic finishes have yet resisted this amazing paint stripper. It was especially formulated to remove epoxies . . . with the same ease that it removes baked enamels, lacquers, etc. No stripping scum—clean rinsing!

- EPOXYSTRIP WILL NOT HARM SOFT METALS
- ECONOMICAL—MORE JOBS PER GALLON AT LOWER COST
- NO SCRUBBING OR MANUAL ASSISTANCE
- RECOMMENDED BY LEADING FINISH MANUFACTURERS

SEND FOR FREE BROCHURE

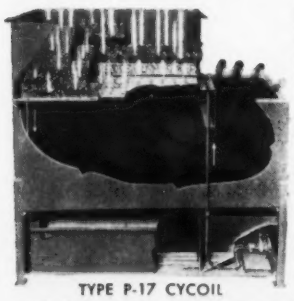
JOBBERS: Beck EPOXYSTRIP sells on demonstration. Try it and see for yourself.

BECK EQUIPMENT COMPANY
3350 WEST 137th STREET — CLEVELAND 11, OHIO

▲ For more details circle NED-302 F8 on enclosed inquiry slip ▲

NEW AAF AFTER-CLEANER

- traps finest metalworking dust
- lowers cleaning costs
- saves money on fuel bills



TYPE P-17 CYCOIL

By collecting *finest* metalworking dust, AAF's new P-17 Cycoil Oil Bath Aftercleaner permits recirculation of cleaned air. This saves fuel dollars, prevents oxidation to building walls and eliminates necessity of "dumping" exhausted air to the outside. In *new* installations of dust control equipment, there's an *added* advantage. The P-17 Cycoil eliminates costly duct work through the building structure. Complete dust collection units may be moved at any time to conform with revision in plant layout.

Call your local AAF representative, or write direct for P-17 Cycoil information.

American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

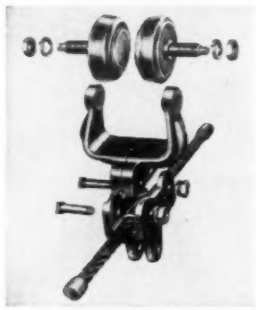
▲ For more details circle NED-303 F8 on enclosed inquiry slip ▲

HYDRAULIC CYLINDERS
single and double-acting types

Hardened, chrome-plated piston rods which minimize friction and provide long packing life are incorporated in this line of low pressure, single and double - acting hydraulic cylinders. Diameters from 1 to 5 in. and strokes from 3 to 40 in. are offered. Cylinders have honed tubes and a variety of packings. Wipers also protect the internal packings. Made by **Dynex, Inc.**, Dept. NED-6, 777 Dynex Dr., Pewaukee, Wis.

▲ For more details circle NED-304 F8 on enclosed inquiry slip ▲

CABLE CONVEYOR
has preformed wire rope links



Truck bodies, TV tubes, and other items are handled by this Cable-Link conveyor system which features links of preformed wire rope made in standard lengths of 8, 16, and 24 in. Trolleys, turns, and vertical dip wheels can be combined for movement in either vertical or horizontal directions. Links are held together by trolley brackets, and link-end fitted shoulders are retained within the trolley cavity in a fixed position. Cable-Link components can be used to replace existing chain conveyors. Made by **Dearborn Fabricating & Engineering Co.**, 19440 Glendale Ave., Detroit 23, Mich.

▲ For more details circle NED-305 F8 on enclosed inquiry slip ▲

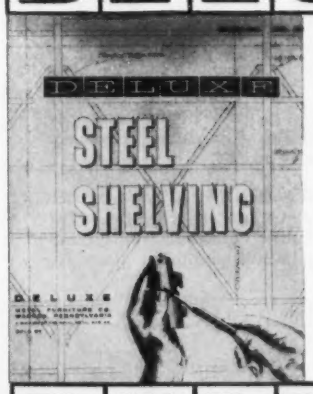
TWO-WAY MOBILE RADIO
FM system uses split channel

Filtering of ignition noises and other common types of interference is built into Model 600 two-way FM radio equipment. A high frequency crystal filter eliminates interference from strong adjacent-channel stations. Equipment operates on 6, 12, or 115 v without modification and is interchangeable in base station and mobile applications. Output from transmitter is 10 w. Base station units are available with 10, 100, or 500-w output. Equipment is housed in a drawn aluminum cabinet measuring 11½ x 8½ x 8 in. and weighing 15 lb 2 oz, less antenna and power cable. Model 600-B/N has a frequency range of 140-152 mc and Model 600-D/N has a range of 152-176-mc. Price is $375. Made by **Aeronautical Electronics, Inc.**, Dept. ASA1, Box 6527, Raleigh, N. C.

▲ For more details circle NED-306 F8 on enclosed inquiry slip ▲

WRITE FOR FREE STEEL SHELVING CATALOG BY...

DELUXE



Complete, colorful 64-page catalog will assist you in planning stockrooms and other storage areas.

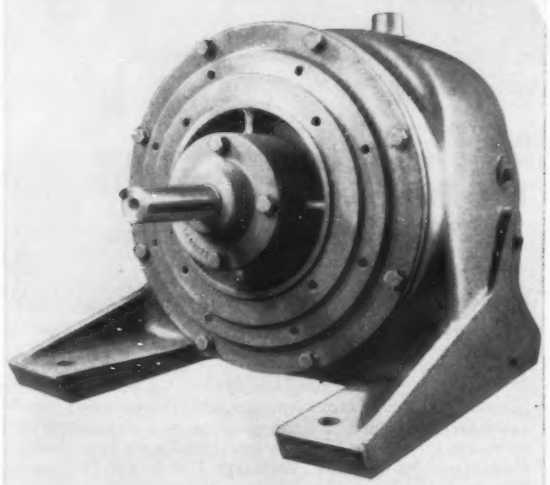
Sections on Deluxe Boltless Steel Shelving, shop equipment, Templa-File, Verti-File® open shelf record filing, colorful library shelving and outstanding Deluxe storage cabinets. It's free! Just write

DELUXE METAL FURNITURE CO.
Warren 2, Pa.
A division of Royal Metal Mfg. Co.

DELUXE

▲ For more details circle NED-307 F8 on enclosed inquiry slip ▲

MODULINE GEAR UNITS



EXCLUSIVE DEVELOPMENT OF WESTINGHOUSE ELECTRIC CORPORATION

ORIGINAL in . . . SIMPLICITY

Internal shafts are splined and threaded to simplify gear and pinion mounting. Only a wrench is needed to disassemble and replace or modify components. Awkward gear pullers and fittings are eliminated. Only seven Moduline unit sizes assemble into over 20,000 different gearmotors and speed reducers.

VERSATILITY

Moduline gearmotors, speed reducers and package motor reducer drives will handle any job from 1 to 75 hp, 1.9 to 420 rpm. Concentric shaft and right angle units for floor, wall, ceiling or angle mounting are built by selecting the proper modules to meet customer drive requirements. Modifications or drive changes can be made on the job.

DEPENDABILITY

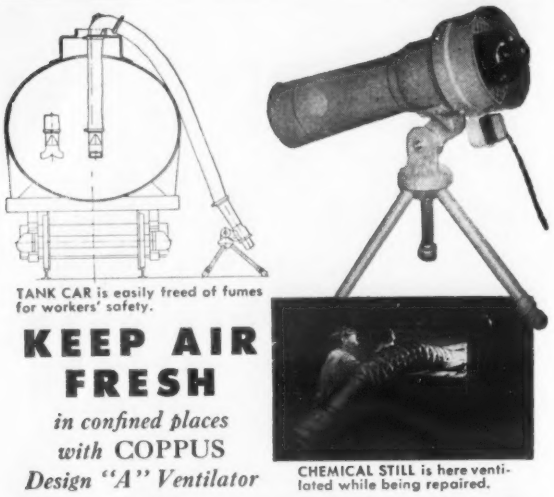
Strong spin-flame, heat-treated, alloy steel gears and proportioned shafts, bearings and structural parts make Moduline units outstanding. Gear teeth are ground so accurately that they meet AGMA standards for master gears. The precision construction and high load-carrying capacity of Moduline units mean years of quiet, trouble-free performance.

J-07366

This free booklet describes Moduline . . . a complete line of speed reducers . . . gearmotors . . . and package motor reducer drives. For your copy write: Westinghouse Electric Corporation, Gearing Division, 200 McCandless Avenue, Pittsburgh 1, Penna.

YOU CAN BE SURE...IF IT'S **Westinghouse**

▲ For more details circle NED-308 F8 on enclosed inquiry slip ▲



TANK CAR is easily freed of fumes for workers' safety.

CHEMICAL STILL is here ventilated while being repaired.

KEEP AIR FRESH

in confined places with COPPUS *Design "A" Ventilator*

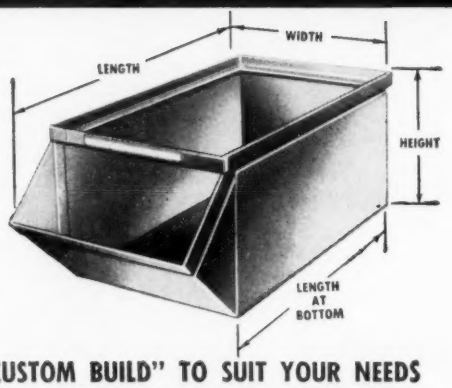
Improve workers' safety—health—comfort—efficiency. Get rid of dangerous gases, fumes, stagnant air. Coppus Design "A" Ventilator ventilates tanks, tank cars, drums, vats, underground cable manholes, pipe galleries, airplane wing compartments, fuselages. For complete information, write Coppus Engineering Corporation, 406 Park Ave., Worcester 2, Mass. Sales Offices in *Thomas' Register*.

Other "Blue Ribbon" Products in *Chemical Engineering Catalog, Refinery Catalog, Best's Safety Directory* and *Mining Catalogs*.

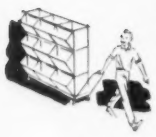
ANOTHER COPPUS "BLUE RIBBON" PRODUCT

▲ For more details circle NED-310 F8 on enclosed inquiry slip ▲

REDUCE HANDLING COSTS! INCREASE STORAGE CAPACITY! SIMPLIFY PARTS CONTROL!



"CUSTOM BUILD" TO SUIT YOUR NEEDS WITH MULTI-PURPOSE STACKBINS



In processing . . .

portable Stackbins carry common parts and supplies to points of usage without time-wasting transferal to other containers.

In storage . . .

Stackbins stack securely to any desired height, with or without Stackracks. Floor space requirements reduced—stock capacity increased.

In assembly . . .

Stackbin flexibility permits adapting assembly station to production requirements.

Available in sizes to suit your requirements

Bin No.	Width	Length	Bottom Length	Height	Weight (lbs.)
00	3½"	6"	4"	3¾"	1¼
0	4½"	8"	6"	4½"	1¾
1	5½"	12"	10"	4½"	3
2	7½"	15½"	12¼"	6"	5½
3	9"	18¾"	14¾"	7½"	9
4	12"	20½"	15¾"	9½"	14
5	15"	24"	18¼"	11"	20½
6	18"	30"	24"	12"	29

COMPARE THE PRODUCT

COMPARE THE PRICE

STACKBINS ARE MADE of heavy gauge steel, all-welded construction with positive stacking rim. Full flow hopper front and smooth interior make contents always visible—always accessible.

All Stackbin products are sold direct. Write for more information today!

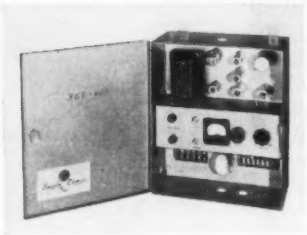
STACKBIN CORP. 1081 Main St., Pawtucket, R.I.

Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., Ottawa

STACKBIN SYSTEM *"Stacked and Still Accessible"*

▲ For more details circle NED-311 F8 on enclosed inquiry slip ▲

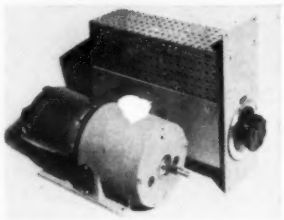
INCREMENTAL CHECK CONTROL detects minute changes in distance



Once set up to recognize a desired constant, the SCI 600 electronic incremental checking control recognizes a minute change from the constant in distance between an object and the sensing element. There is no contact with the object being sensed. Control actuates either a plus or minus relay which can operate a correcting device. To achieve accuracies of ±0.0001 in., the sensing element must be within 1/32 in. of the object. Sensing element can be located up to 10 ft away from the control cabinet. Device can recognize ferrous or nonferrous, conductive or nonconductive objects, and will check size or thickness; a coating, either its presence or thickness; and deviation between two points. Operation is on 115-v, 60-cycle ac. Made by **Security Controls, Inc.**, 256 Franklin St., Buffalo 2, N. Y.

▲ For more details circle NED-312 F8 on enclosed inquiry slip ▲

REMOTE CONTROL SYSTEM for machines, valves, handling



Electrolink 60 closed-loop remote positioner is designed for industrial applications requiring fast response, high output torque, and a high degree of accuracy. It is adaptable to automation of machine tools, valves, materials handling, processing, packaging, testing, and procedures involving hazardous operations. Movement of a manual control (dial, lever, or preset pushbutton) is converted into a polar electrical error signal which, through one of two magnetic powder clutches in a servo drive, rotates the output shaft in the commanded direction. The output shaft accuracy exceeds 0.25 degree. At maximum excitation, servo output torque is 250 lb-in. The control can be panel mounted away from the amplifier, and the servo gearbox can be separated from the drive for a gang hook-up of several gearboxes to a single power source. Operation is on 115 v, 60 cycles ac. Made by **Lear, Inc.**, Dept. 80, Box 688, Grand Rapids, Mich.

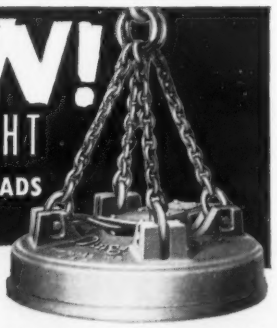
▲ For more details circle NED-313 F8 on enclosed inquiry slip ▲

Hard-Surfacing Materials

McKay Co.—Offered as a guide to the selection and use of hard-surfacing electrodes and wires for automatic or semiautomatic application is Catalog HS-127. Over 500 different uses of hard surfacing are listed, and techniques to be employed are discussed. Selection information is given to aid in choosing the right material for overlay and build-up purposes.

▲ For more details circle NED-314 F8 on enclosed inquiry slip ▲

NEW! LIGHTER WEIGHT FOR GREATER PAYLOADS



DINGS ALUMINUM-WOUND LIFTING MAGNETS

- **Exclusive Anodized Aluminum Wire** is insulated by an oxide coating to eliminate the need for insulating tape, required in all other aluminum- or copper-wound lifting magnets. Dings lightweight design gives lifting capacity equal to much heavier units.
- **Greater Payloads** are assured with lighter weight. You can now use larger, more powerful Dings Aluminum-Wound Magnets on cranes previously limited to handling smaller magnets.

Get complete information about the many other money-saving features of the ONLY lifting magnet which gives maximum lifting power with light weight. Write for Bulletin B-1401-A.

Dings

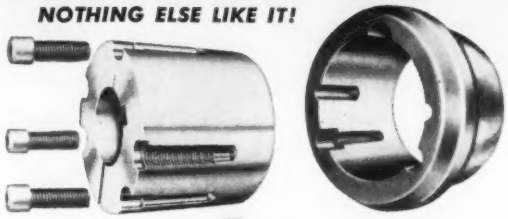
DINGS MAGNETIC SEPARATOR CO.
4758 W. Electric Ave. • Milwaukee 46, Wisc.

LM-158-1/9

▲ For more details circle NED-315 F8 on enclosed inquiry slip ▲

TAPER-LOCK BUSHINGS WITH WELD-ON HUBS

NOTHING ELSE LIKE IT!



FOR your sprockets, gears, clutches, motors, impellers—for wheels of all kinds where service conditions are *really rugged*—there is nothing like TAPER-LOCK. This famous patented bushing—supplied for your use with matching TAPER-LOCK Weld-on Hub—gives you an easy-mounting, true-running unit that locks to the shaft with firmness equivalent to a shrunk-on fit. *WRITE* for special bulletin A-628B with specifications and entire range of shaft sizes (1/2" to 10").

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

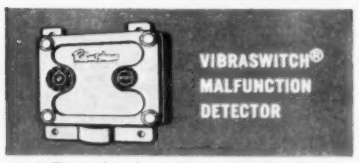
DODGE *of Mishawaka, Ind.*

▲ For more details circle NED-316 F8 on enclosed inquiry slip ▲

END VIBRATION MENACE!

This unique new "vibration-level monitor" stands constant guard over costly reciprocating and rotating equipment to signal mechanical malfunction the instant destructive vibration starts. Machinery can be shut down or an audible alarm sounded once a preset vibration level is exceeded. Designed to be *acceleration-sensitive*, VIBRASWITCH can detect harmful low amplitude high frequency "noise", such as that caused by bearing failure, which frequently cannot be measured with a conventional displacement type vibrometer. Extremely reliable and maintenance-free—available in various models and housings.

Write for technical bulletin RF-586-D.



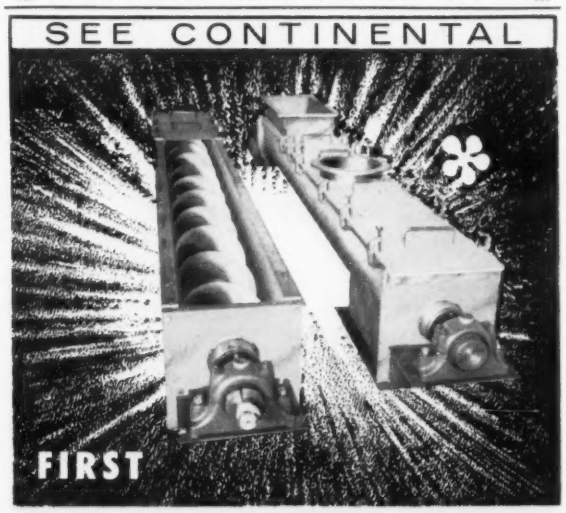
VIBRASWITCH® MALFUNCTION DETECTOR

"Everything's under control"

AERONAUTICAL AND INSTRUMENT DIVISION
Robertshaw Fulton CONTROLS COMPANY
SANTA ANA FREEWAY AT EUCLID AVENUE • ANAHEIM, CALIFORNIA

▲ For more details circle NED-317 F8 on enclosed inquiry slip ▲

SEE CONTINENTAL



FIRST FOR *Screw Conveyors*

Continental's wide experience in manufacturing special and standard screw conveyors and screw elevators is available to assist in your planning.

Custom Made Stainless Steel Screw Conveyor.

CGC INDUSTRIAL DIVISION
Continental Gin Company
BIRMINGHAM, ALABAMA
ATLANTA • DALLAS • KNOXVILLE • MEMPHIS • MOBILE • NEW YORK 17

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For the finishing touch that means so much!

Whether you're polishing the business end of a stainless steel golf club or smoothing out the rough spots in precision instrument parts, Jewel Brand Coated Abrasives ensure faster, finer finishing. On job after job, experience proves that **end products cost less when you finish with Jewel Brand Abrasives.** Prove it for yourself now. Order from your Industrial Distributor or write for specific recommendations.

COATED ABRASIVES

Belts • Rolls • Sheets • Discs • Specialties

ABRASIVE PRODUCTS, INC.
South Braintree 85, Massachusetts

▲ For more details circle **NED-319 F8** on enclosed inquiry slip ▲

Now available— SEL-LOK spring pins in beryllium copper

- **Superior electrical properties**
- **Excellent corrosion resistance**
- **Fast, economical fastening**

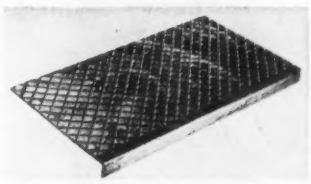
SEL-LOK spring pins made of beryllium copper give you the speed and economy of self-locking fastening, plus outstanding electrical characteristics. They have high conductivity, are nonsparking and nonmagnetic. In addition, they offer superior corrosion resistance. These properties are combined in a material having 60% the strength of carbon steel, more than ample for most applications. Sold by your authorized SPS distributor in sizes from 1/16 x 3/16 to ¼ x 3½ in. Write for Catalog Sheet 2376. (SEL-LOK spring pins also available in carbon or corrosion-resistant steel, sizes from 1/16 x 3/16 to ½ x 5 in. Request Bulletin 2331.) STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

SPS **Jenkintown • Pennsylvania**

Standard Pressed Steel Co. • The Cleveland Cap Screw Co. • Columbia Steel Equipment Co. • National Machine Products Co. • Nutt-Shel Co. • SPS Western • Standco Canada Ltd. • Unbrako Socket Screw Co., Ltd.

▲ For more details circle **NED-320 F8** on enclosed inquiry slip ▲

STAIR TREAD
rubber-cord unit has long life



Made of Do-All rubber and cord compound, this long-wearing stair tread is available with either a rounded or square molded nose. Treads are ¼ in. thick and up to 36 in. wide. Depths range from standard 12 in. to 24 in. Available for use with the treads is a 36 x 34-in. landing mat of the same material and design. Made by **American Mat Corp.**, 1795 Adams St., Toledo 2, Ohio.

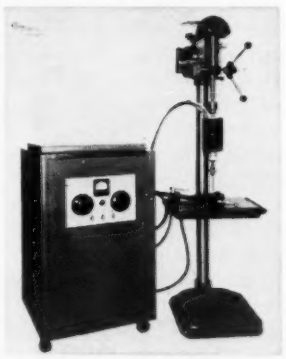
▲ For more details circle **NED-322 F8** on enclosed inquiry slip ▲

STOP WATCHES
three heavy duty laboratory types

Dial size of these Swiss-made James Jaquet laboratory stop watches is 2.36 in. for readability at a distance. Built to withstand heavy duty use, they are offered in large hand type; large hand type with electrical contacts; and electromagnetic type with stand (illustrated). The electromagnetic type can be operated by hand and electrically. Starting and stopping are effected by electric impulses, or watches are started by closing the circuit of the magnet and stopped when the circuit is opened. Watches will indicate 1/5, 1/10, 1/50, or 1/100 sec. Decimal types with 1/100-min indication are also offered. Distributed by **Herman H. Sticht Co.**, Dept. ED, 27 Park Place, New York 7, N. Y.

▲ For more details circle **NED-323 F8** on enclosed inquiry slip ▲

METAL DISINTEGRATOR
removes broken taps, studs, pins



Series of intermittent electric arcs which disintegrate the hardest of metals provide the cutting action of the Model C-66 metal disintegrator. Suited for removing broken taps, reamers, studs, set screws, ejector pins, bushings, and other parts, the machine has its own pumping system and is used with other shop equipment such as drill presses. Coolant is pumped through the electrode (the cutting tool) to wash away particles of metal as they are removed. It will also drill curved and other odd-shaped holes. Made by **Cammann Mfg. Co.**, Dept. N, 2700 Henninger Rd., Cleveland 9, Ohio.

▲ For more details circle **NED-324 F8** on enclosed inquiry slip ▲

THIS CARTRIDGE IS EXPENDABLE.....

YOUR PLANT EQUIPMENT IS NOT, AFTER YOU INSTALL

BOWSER FIG. 835 FILTERS

Metalworking machinery, meters, valves, tools and other costly equipment is protected and more productive with Bowser filters in the lube or process-liquid lines.

Sizes from 2 to 100 sq. ft. Filter Area

BOWSER MICRO-FILTRATION POLISHES PROCESSED LIQUIDS

Edible oils, alcohols, lacquers and proprietary liquids are better finished with Bowser laminated cellulose cartridge filters.

Write For Fig. 835 Bulletin

FILTERS PETROLEUMS AND ALL OTHER OILS; SOLVENTS, THINNERS, PROCESS AND METAL PLANT LIQUIDS

PRODUCT OF BOWSER RESEARCH

Sales and Service in Principal Cities

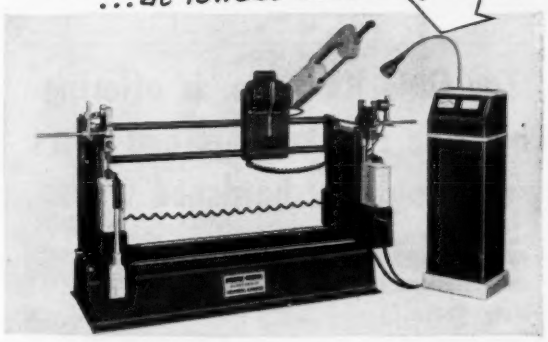
BOWSER, INC., 1387 E. CREIGHTON, FT. WAYNE, IND.

▲ For more details circle **NED-325 F8** on enclosed inquiry slip ▲

NOW! *the most versatile, precision*

DYNAMIC BALANCERS

...at lowest cost!



THE NEW STEWART-WARNER

Electronic Industrial Balancers

The new Stewart-Warner Industrial Balancers not only give you lowest first cost, but cut the cost of balancing per piece so low that even smallest shops can now afford their own precision balancing equipment! Handle single-piece, short-run and long-run production, as well as maintenance of your own machines. Semi-skilled workers can learn to operate them in one day! Extremely versatile, sturdy, accurate.

Balancing an Armature

Balancing a crankshaft

- ★ **4 models for use in single-piece, short-run or long-run production quantities.**
- ★ **Set-up time less than 2 minutes!**
- ★ **For balancing a wide range of work on same machine — with no special tooling, coupling devices or accessories needed to change jobs!**

Only the Stewart-Warner Balancers Offer These Maximum and Minimum Ranges:

	Weight Range	Diametral Range	Length Range	Sensitivity
Model 702	¼ lb. to 300	¼" to 30"	4¼" to 40"	0.01 inch-oz.
*Model 704	½ lb. to 1000	½" to 44"	4½" to 55"	0.01 inch-oz.
*Model 708	1 lb. to 5000	1" to 68"	7" to 83"	0.04 inch-oz.

Portable In-place balancing of all rotating machinery.

**Various weight and length modifications available upon request.*

Symbol of SW Excellence **STEWART-WARNER CORPORATION**

Mail coupon for illustrated brochure!

STEWART-WARNER CORPORATION, Dept. SS-68
1850 Diversey Parkway, Chicago 14, Illinois

Please mail me all the facts about Stewart-Warner Industrial Balancers.

Name .....

Company .....

Address .....

City ..... Zone ..... State .....

▲ For more details circle **NED-326 F8** on enclosed inquiry slip ▲

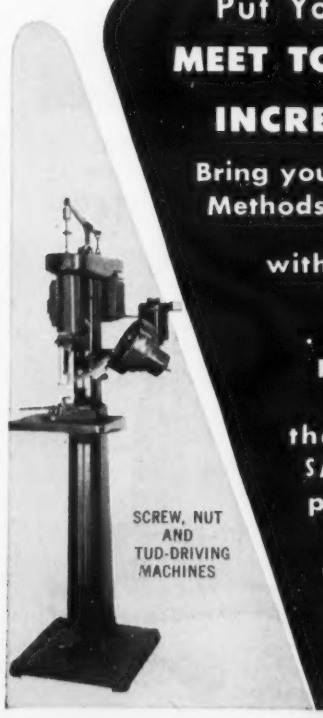
Put Yourself in Position to

MEET TODAY'S COMPETITION AND INCREASE YOUR SALES

Bring your Assembly and Machining Methods Up-to-Date and Cut Costs

with **DPS** POWER METHODS

...the Key to PRODUCTION ECONOMY— that will mean more SALES ACTIVITY and protection to your PROFITS through ability to meet the price resistance that exists *Today!*



SCREW, NUT AND TUD-DRIVING MACHINES

Why waste money waiting? Act now! Phone or write today— Get our literature—Send parts and prints if possible for engineering study.

DETROIT POWER SCREWDRIVER CO.

2819 W. FORT STREET • DETROIT 16, MICHIGAN

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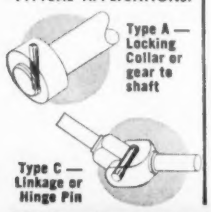
have you checked

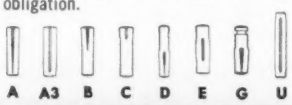
DRIV-LOK PIN *advantages?*

1. Positive anchoring . . . once in they *stay in* . . . yet they're re-usable
2. Stronger, safer, solid body
3. Quick installation . . . Lower Costs

DRIV-LOK Pins are effecting great economies and product improvement in applications of every type. Easy to install — just drill the hole and press or drive them in. The job is done — no reaming, no expensive hole preparation. Available in carbon steel in 8 standard types; also a wide variety of special materials. Write us, describing your fastening requirements. Catalog and samples sent without obligation.

TYPICAL APPLICATIONS:





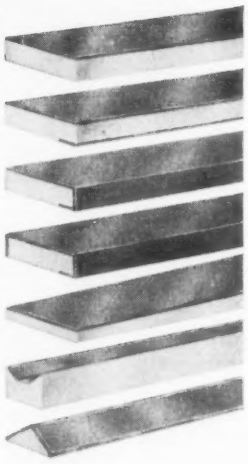
DRIV-LOK SALES CORPORATION
717 Park Avenue • Sycamore, Illinois

For more details circle NED-327 F8 on enclosed inquiry slip

MACHINE TOOL **news**
O-KNI-CO
PRODUCTION FACTS THAT INCREASE YOUR PROFITS
PUBLISHED BY THE OHIO KNIFE CO., CINCINNATI, OHIO

The Ohio Knife Co. is offering machine tool builders and users amazing new hardened ways.

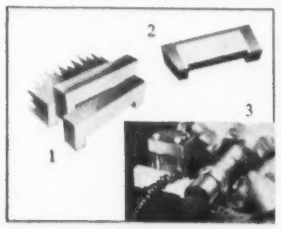
available in 7 standard cross sections in over sixty sizes.



By a time proven process, special analysis tool steel of any thickness is eternally bonded to a soft, tough, easily machinable steel, producing a superior way that will not warp or bow. Special O-KNI-CO hardening process (65-66 Rockwell C) to full depth of tool steel, along entire length of way, develops tremendous wear-resistant qualities, practically eliminating galling or scoring. The result is a continuing high degree of accuracy of the machine under even the severest work loads.

Gisholt Machine Company gives unique demonstration to prospective lathe buyers

Prospective lathe buyers witnessed an amazing demonstration of OK Bedway hardness at the Gisholt Machine Company, Madison, Wisconsin. Gisholt uses OK Ways exclusively on their ram and saddle turret lathes. To prove their quality they (1) took a section from an OK Bedway, (2) made it into a tool bit, (3) locked it in a fixture and cut spiral shavings from 1045 cold-rolled steel.



FREE technical literature available. Check off—mail coupon today.

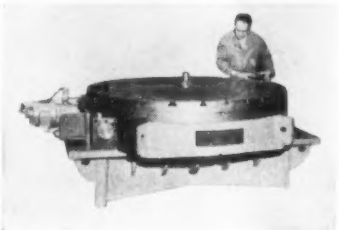
THE OHIO KNIFE CO., Cincinnati 23, Ohio, Dept. 71-H

Gentlemen: Please send me free copy of:
☐ HARDENED WAYS—Seven Cross Sections in over 60 sizes.
☐ SHEAR BLADES.
☐ SLITTING—A Basic Guide for the New Operator.

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____
7610

For more details circle NED-328 F8 on enclosed inquiry slip

ROTARY INDEXING MACHINES have 24 to 84-in. table diameters for heavy drilling, milling, boring

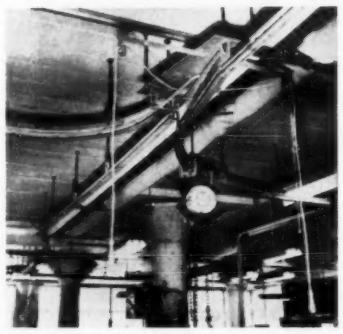


Series of universal, automatic, rotary indexing machines is suitable for heavy drilling, milling, boring, and inspection operations. Machines are adaptable for programming, tracing, and broaching. Unbalanced loads up to 50,000 lb can be accommodated. Backlash can be eliminated by simple axial adjustment of worm. Accuracy is to within 5 sec of arc on A Series machine, and within 15 sec on the B Series.

Another feature is high-speed indexing. A simple change gear system allows varying the index. From 10 to 2500 divisions are obtainable automatically. Manually, the range is infinite. Positioner can be card or tape-controlled. Horizontal or vertical types of machines in table diameters of 24, 30, 36, 48, 60, 72, and 84 in. are available. A sine base arrangement permits mounting table at any angle. Made by **Lapointe Machine Tool Co.**, 39 River St., Waltham, Mass.

For more details circle NED-329 F8 on enclosed inquiry slip

MONORAIL offered with varied accessories, is interchangeable with other systems



Ductile iron hangers used in this low cost Twin City monorail line are anchored between the rail by clamping the rail around the hangers. Trolley yokes, load bars, and suspension fittings are also ductile iron for bending and twisting without breaking. Monorail line is interchangeable with other monorails for additions or expansion. Trussed and/or girded rail; a selection of tongue, glide, and rotary switches; cross-tracks and turntables; and bare or shielded types of electrification are offered.

Line also includes cranes with capacities up to 10 tons, with hand propulsion or electric fluid drive. A rubber-tired drive wheel offers maximum crane traction. Spans up to 40 ft can be made with adequate structural sections. Auxiliary equipment includes grabs, scales, lift sections, dipping machines, special buckets, racks, fire door openers, and special switches. Made by **Vern G. Ellen Co.**, Dept. N, 2123 Broadway St. N.E., Minneapolis, Minn.

For more details circle NED-330 F8 on enclosed inquiry slip

Remains of a removed broken drill.

This ¼" HS drill was embedded 2" in a crankshaft oil hole. An Elox M-310 Electron Drill removed it in 7 minutes and cost . . .

.02 . . . . . for a .125" copper electrode
.19 . . . . . for labor (@ $2.25 per)
.01 . . . . . for electricity

22¢ of time, labor and material to restore a part worth approx. $18!

Elox can work for you saving your valuable parts: • Corrective machining after heat treating • Die salvage, drilling bolt holes, lubricant holes • Machining odd shapes in all metals.

*TM Reg.

elox* *corporation of michigan*

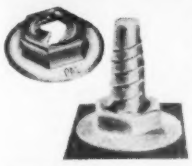
1838 N. Stephenson Highway, Royal Oak 3, Mich.

For more details circle NED-331 F8 on enclosed inquiry slip

SAVE COST OF THREADING!

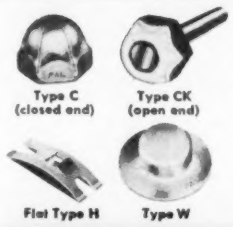
Also eliminate notching—drilling holes for cotter pins

These low-cost, vibration-proof PALNUT Fasteners assemble fast—hold tight on unthreaded zinc die-cast studs; also on unthreaded rod and wire of steel, aluminum and brass.



PALNUT SELF-THREADING LOCK NUTS

Form deep, clean threads on unthreaded studs, rod or wire while tightening. Save threading costs. Provide strong, vibration-proof assemblies. Fast assembly with standard tools. Remove and re-use on same assembly. Sizes for 1/8", 3/16" and 1/4" dia. studs or rod.



PUSHNUT® FASTENERS

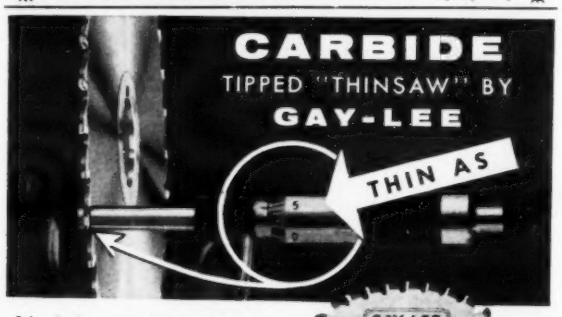
Simply push or tap on unthreaded studs, rod, wire or rivets. Strong spring grip resists removal and prevents loosening or rattling under vibration. Low in cost, fast assembly. Variety of types and sizes for wide range of applications.

PALNUT® LOCK NUTS and FASTENERS

Write for free samples, stating type, size and intended application.

THE PALNUT COMPANY
45 Glen Road, Mountainside, N. J.
In Canada:
P. L. Robertson Mfg. Co., Ltd., Milton, Ontario

For more details circle NED-332 F8 on enclosed inquiry slip



Ideal for precision, high-production sawing, slitting, slotting! Exclusive Gay-Lee design features long-wearing carbide tips brazed into a circular seat which provides more brazing area, greater mechanical strength and maximum tip security. (Patented, U. S. Pat. No. 2675603, manufactured under license.)

- Thicknesses low as .030"
- Thickness tolerance can be held to .0001"
- Wafer-thin for the most delicate work
- Maintain positive alignment and rigidity
- Cut to full depth without runout
- Available in any carbide grade
- O. D. from 1½" to 10"
- Made to any tooth form

CARBIDE SAW SPECIALISTS

GAY-LEE COMPANY
CLAWSON • MICHIGAN

Write for free literature, send us details of your problem, or bring your problem.

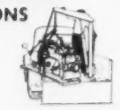
For more details circle NED-333 F8 on enclosed inquiry slip

LIFT MORE FOR LESS

...with **RUGER**

MULTI-PURPOSE CRANES
CAPACITIES ¼ to 3 TONS

PRICED AS LOW AS $149.00 TM ¼



Ruger mobile hydraulic cranes reach in-under-over for versatile lifting power where and when you need it. They enable one man to lift and move anything that will hang on a hook. Manual and electric models: floor . . . truck . . . convertible floor and truck . . . short mast . . . high mast . . . wide base . . . adjustable legs and retractable outrigger for side lifting. To lift more for less, get the facts today.

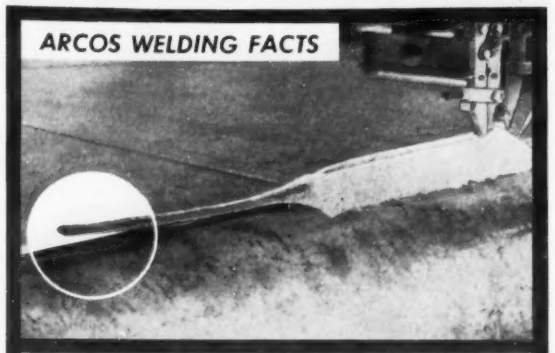
THE CRANE WITH 1000 USES

RUGER

N-610-RE

RUGER EQUIPMENT, INC.
619 WEST FOURTH ST. • UHRICHSVILLE, OHIO

For more details circle NED-334 F8 on enclosed inquiry slip



How to Produce Submerged Arc Welds with "Self Removing" Slag

With any of the new Arcosite Bonded Fluxes, the *slag breaks clean* — from the weld — *as it cools*. This means a dramatic reduction in weld cleaning time — an important cost-saving factor in welding stainless and low alloy steels by submerged arc welding. Another saving with Arcosite Flux comes from the small amount of Flux *consumed* per foot of deposited weld metal. For best results, specify Arcos *welding quality* bare wire, Arcosite's companion product.

FREE BULLETIN ON REQUEST

Send for this additional information. Full Application data on five new Arcosite Bonded Fluxes.

Arcos Corporation, 1500 S. 50th St., Philadelphia 43, Pa.

ARCOS | Filler Metal Specialists

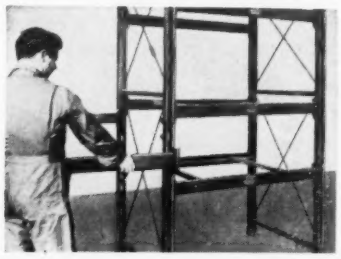
For more details circle NED-335 F8 on enclosed inquiry slip

AUTOMATIC DIE STOP
is installed in 20 minutes

Designed to stop material just prior to piercing, shearing, or blanking operations, this automatic die stop is installed in 20 min by drilling and reaming a hole in the proper location and pressing it in position. It is actuated by an adjusting screw in the top die shoe. It assures a rigid, durable gaging surface. Made by **Keystone Engineering & Mfg. Co.**, 122-A S. W. 16th St., Des Moines 12, Iowa.

For more details circle NED-338 F8 on enclosed inquiry slip

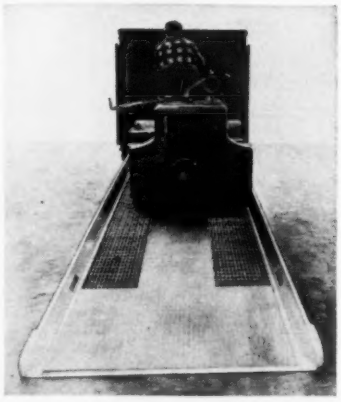
ADJUSTABLE STORAGE RACK
stringers made in three capacities



Improved "slide-n-lock" adjustable storage rack Model SL-2 has a new locking clamp which contributes to rigidity and ease of adjustment. Light, medium, and heavy duty stringers, made of continuous welded tubing, provide three different capacities. They are moved upward and downward in the slotted posts to compensate for storage of items of various sizes. End bracing adds rigidity and strength. Made by **American Metal Products Co.**, 5971 Linsdale Ave., Detroit 4, Mich.

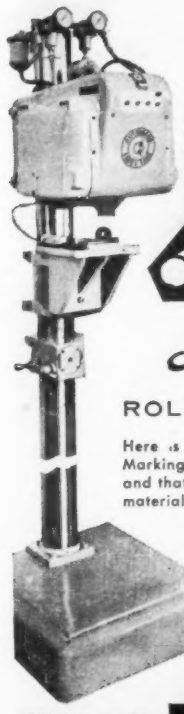
For more details circle NED-339 F8 on enclosed inquiry slip

MAGNESIUM RAMPS
have nonslip grating tracks



Heavy duty, open construction, self-cleaning grating tracks are recessed in the deck surface of this series of portable Magliner magnesium ramps. The grating eliminates traction problems caused by snow, ice, rain, mud, oil, or grease build - up. Ramps are available in 58 and 70-in. widths and 30 and 36-ft lengths. They can be handled by one man and have capacities from 11,000 to 16,000 lb. Other features are 4½-in. high curbs and pneumatic wheels with high speed bearings. Made by **Magline, Inc.**, Box 200, Pinconning, Mich.

For more details circle NED-340 F8 on enclosed inquiry slip



Now! MARK

FLAT, ROUND, CONTOURED SURFACES *at* HIGH SPEEDS!

MARKS ANY SHAPE

WITH *Automark* (MODEL HRMA) ROLL MARKING MACHINE

Here is speed, versatility and adaptability in a Marking Machine that operates by air pressure and that is controlled electrically. Marks any shape material... round, flat or contoured.

CUTS PRODUCTION COSTS... GREATLY INCREASES OUTPUT

The Automark operates at speeds up to 6,000 or more 1-inch strokes per hour, or 1,400 strokes per hour on stroke of ram and die slide combination. Think of all the saving in time and money with Automarks in your shop!

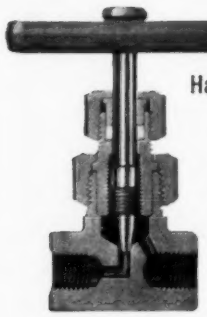
AUTOMATIC FEEDS *and* FIXTURES MAY BE SUPPLIED...

SEND FOR BULLETIN ▶ DEFIANCE MACHINE & TOOL CO. 1922 S. VANDEVENTER Dept. QD ST. LOUIS 10, MO.

For more details circle NED-341 F8 on enclosed inquiry slip

for dependable field service

SPECIFY AMERICAN® NEEDLE VALVES



Handle the toughest meter manifold jobs and corrosive field services. Eliminate gland leaks.

Teflon-packed forged steel American® Needle Valves deliver year 'round dependable service—stand up under all conditions. Stainless or carbon steel precision machined valve bodies are ideally suited for welding. Stainless steel centerless-ground valve stem design makes it simple to repack valves under pressure.

Standard valves are design rated for pressures to 5,000 psi at 70°F. Upon request, assembled valves are hydrostatically tested to 10,000 psi (twice rated working pressure) and individually inspected. Valves are also furnished with graphite-impregnated asbestos packing for temperatures above 450°F.

Angle or straight patterns — screwed or union bonnets.

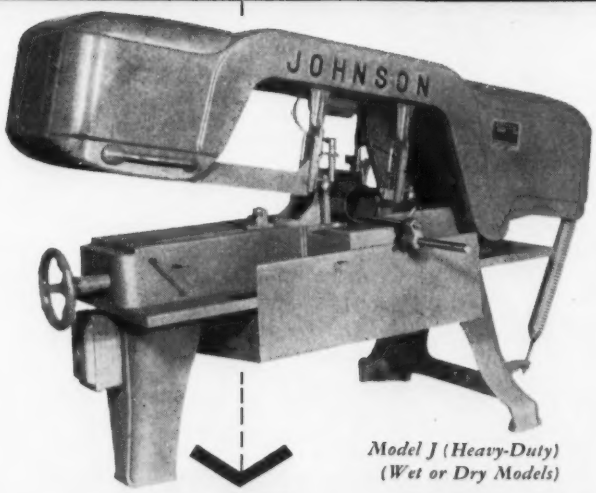
Ask your American Meter representative for full details.

AMERICAN® METER COMPANY INCORPORATED ESTABLISHED 1836 | Executive Offices: Philadelphia 16, Pa. Sales offices in principal cities.

For more details circle NED-336 F8 on enclosed inquiry slip

THE BIG NEW **Johnson** "SPEAKS FOR ITSELF IN ANY SHOP!"

Johnson Model "J"... the heavy duty band saw that speaks for itself. No other saw handles so many operations so easily and so economically. Why pay more when a Johnson Model "J" can cut the 10" rounds, 18" flats and odd shaped steels of your shop in such labor saving time. The Big "J" is completely automatic—and is available in a wet or dry model, both with variable speed and centralized control system. You can't afford to miss any information on the rugged Johnson Model "J". Contact your dealer today!



Model J (Heavy-Duty) (Wet or Dry Models)

Eastern Distributor R. J. R. KELLY CO. Hale Bldg., 51 Main St. East Orange, N. J.

Midwestern Distributor W. Q. LUNDMARK 75 N. Broadway Des Plaines, Ill.

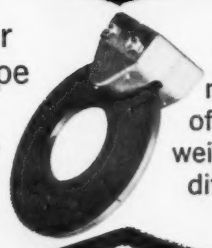
Western Distributor HASTINGS DISTRIBUTORS 1605 Solano Avenue Berkeley, Calif.

Johnson MANUFACTURING CORPORATION Barnes & Taylor Sts. • Albion, Michigan

For more details circle NED-337 F8 on enclosed inquiry slip

Where Ordinary brakes won't do—

Goodyear Aircraft-Type **DISC BRAKES**



designed to meet problems of torque, energy, weight or space, in difficult industrial applications

Now the brake that was tested and proved on the world's fastest airplanes is available to solve the most complex industrial braking problems.

The Goodyear aircraft-type Disc Brake offers these special advantages:

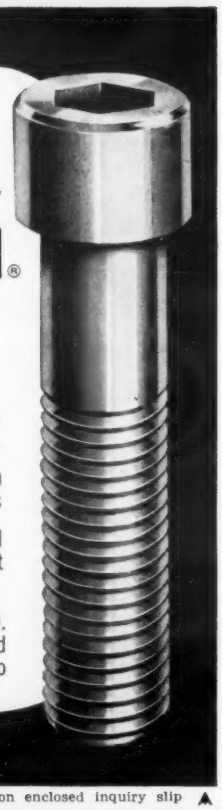
SMOOTH ACTION—non-self-energizing, it produces equal torque in either direction proportional to the force applied. FASTER COOLING—has higher kinetic energy capacity than any other industrial brake of comparable size. FLEXIBILITY—design principle permits almost any combination of torque and energy capacities. VERSATILITY—can be operated hydraulically, mechanically, pneumatically or can be spring-set, solenoid-released. AUTOMATIC ADJUSTING—hydraulic- and air-actuated units have automatic compensation for lining wear. ECONOMICAL—saves on equipment "down time" due to quick, easy lining replacement.

For a complete on-the-job analysis of how the Goodyear aircraft-type Disc Brake can meet your brake engineering problems, write today to Goodyear, Aviation Products Division, Industrial Disc Brake Dept. R-1729, Akron 16, Ohio.

THE *Aircraft Type* INDUSTRIAL DISC BRAKE BY

GOODYEAR AVIATION PRODUCTS

For more details circle NED-342 F8 on enclosed inquiry slip



You can do better...with

B-RIGHT-ON®

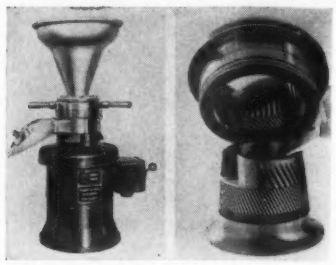
SOCKET SCREW PRODUCTS

- Rigid QUALITY CONTROL from initial steel selection to final packaging
- IMMEDIATE SERVICE from selected mill supply houses' stocks
- Design and Dimensional Brochure on request

THE BRIGHTON SCREW & MFG. CO.
1957 Reading Road
Cincinnati 2, Ohio

▲ For more details circle NED-345 F8 on enclosed inquiry slip ▲

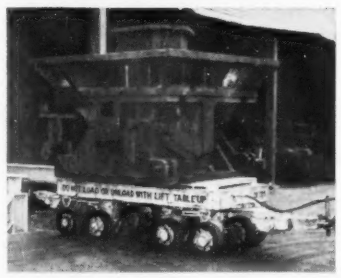
MULTISTAGE DISPERSION MILL capacities from 44 to 30,000 lb/hr



Serving as its own pump, the PUC multistage dispersion mill for wet milling and grinding, homogenizing, dispersing, and extracting draws material down through a multistage grinding area to preset sizes. Product is then ejected under pressure. Unit consists of conical ring shaped grooved stator having two to five grinding stages. A grooved rotor with corresponding multiple grinding stages turns within the stator. Milling gap or slit between the two parts decreases in a downward direction. Gap can be regulated for various micro-clearance settings. Crushing and homogenizing are performed by mechanically produced vibrations within grooved milling stages. Capacities range from 44 to 30,000 lb per hour. Made by **Pfaudler Co.**, Dept. NED, 1062 West Ave., Rochester 3, N. Y.

▲ For more details circle NED-347 F8 on enclosed inquiry slip ▲

HEAVY DUTY PLANT TRAILER handles dies weighing 40,000 lb



Transportation of dies weighing up to 40,000 lb between storage areas and stamping departments is function of this heavy duty industrial trailer. It is 48 in. wide, 96 in. long, and 29 in. high, and has two spring-balanced tongues for towing from either end. Sixteen 15 x 5-in. solid rubber-tired wheels are mounted on Timken roller bearings and 2¼-in. axles. Steering is synchronized and each wheel assembly is articulated for load stability on rough surfaces. Trailer deck is mounted on four 4-in. diameter hydraulic cylinders, each with a 3-in. stroke, and actuated by the towing tractor's hydraulic system. Stored dies on special saddles permit the trailer to be backed under the die. Deck is then raised so that the dies clear the saddle. Made by **Salem-Brosius, Inc.**, 16 Arch St., Carnegie, Pa.

▲ For more details circle NED-348 F8 on enclosed inquiry slip ▲

Aid to Trap Maintenance

Tempil Corp.—"Something New in Trap Maintenance" is a handy reference card which explains how to detect a defective steam trap by using Tempilstik temperature-indicating crayons. Correlation between trap pressure and temperature is tabulated.

▲ For more details circle NED-349 F8 on enclosed inquiry slip ▲

Commander

MULTI-ANGLE DRILL UNIT

- Compact—only 2¾" wide x 10¾" long
- Drills on close centers
- Low cost
- Simple, fast set-up

PRICE ONLY $125.00

MULTI-ANGLE Drill unit is a complete, compact drill unit that easily adapts to special drilling problems where tooling space is limited. Ideal for angle drilling. Adapts to many power sources—flexible shaft, air or electric motors. Hydraulic spindle actuation—up to 4" stroke.

Write for complete details and name of nearby Commander Distributor

Commander MFG. CO.
4220 W. KINZIE ST., CHICAGO 24, ILLINOIS

▲ For more details circle NED-351 F8 on enclosed inquiry slip ▲

FREE CATALOG brings you up-to-date on DY-NAMIC BALANCING

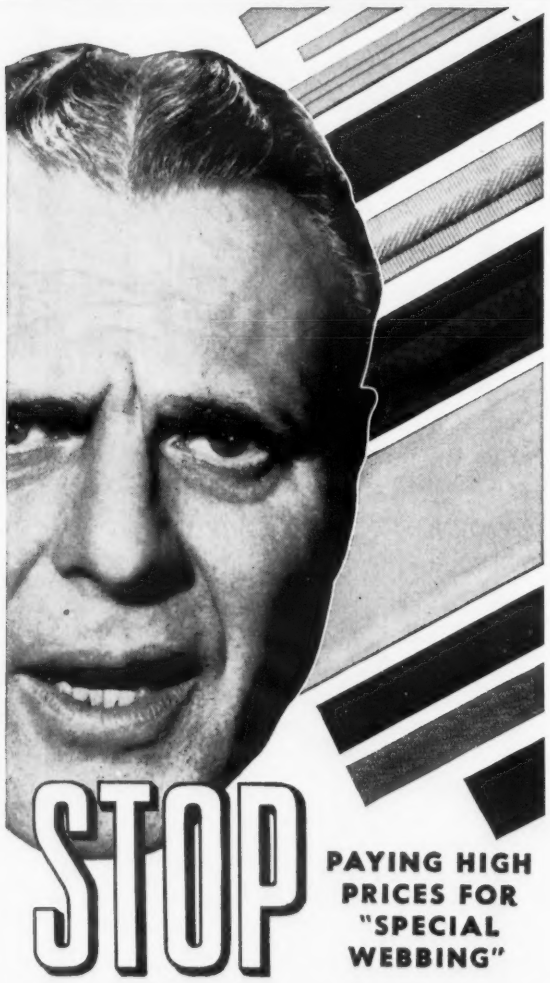
See how Bear simplicity of operation eliminates noise and vibration in rotating parts quickly, accurately, economically. Read how Bear precision reduces wear of valuable machinery . . . cuts costs. 24 pages of installation pictures, diagrams, specifications—sent without obligation. Write Bear Mfg. Co., Dept. N-5, Rock Island, Illinois.

Profit by Ontario's experience with light paper machine rolls!

SAVINGS $120 per roll by doing balancing jobs themselves.
RESULTS Unbalance corrected: 6 oz. to 40 lbs.
IMPORTANCE of Dy-Namic Balancing Static balancing found entirely unsatisfactory.
VERSATILITY Bear machine also balances electric motor rotors, centrifugal pump rotating assemblies.

BEAR
STATIC AND DY-NAMIC BALANCING MACHINES

▲ For more details circle NED-352 F8 on enclosed inquiry slip ▲



STOP PAYING HIGH PRICES FOR "SPECIAL WEBBING"

We can probably supply it at a standard price!

Because we are America's OLDEST Webbing manufacturer, we naturally have the biggest line of Standard Webbings in the country. From dainty little nylon straps for milady's footwear to rugged cargo straps, we carry hundreds of sizes, widths, weights, plain colors and fancy patterns. This tremendous assortment includes cotton, nylon, dynel, dacron, jute, combed peeler mercerized and high tensile webbings. 80% of our STANDARD line would be considered "SPECIALS" by other manufacturers and sold to you from the "SPECIAL" price list. That's why, no matter what use you have for webbing, you can very likely save money here. Let us give you the facts.

Write for FREE SAMPLES and PRICES

Tell us how much webbing you use annually and if possible send a sample for us to match.

BUFFALO WEAVING AND BELTING CO., INC.
210 CHANDLER STREET BUFFALO 7, N. Y.

We also manufacture a complete line of WOVEN COTTON CONVEYOR BELTS and PURE SHEET RUBBER.

▲ For more details circle NED-346 F8 on enclosed inquiry slip ▲

Interlocked super-safety GRATING

Dravo I-U-2 safety grating is particularly desirable in areas for public use. Bearing bars are 5/16" thick, spaced 1" or 1⅛" apart. Cross bars are 2" center to center. Note spacing—an object over ½" square cannot pass through the openings.

For information, write Dravo Corporation, Dept. D-2506, Pittsburgh 22, Pa.

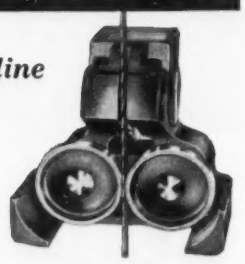
DRAVO CORPORATION

▲ For more details circle NED-350 F8 on enclosed inquiry slip ▲

CARTER BAND SAW GUIDES

world's largest, most complete line

- For Any Saw
- Any Speed
- Any Load
- Any Purpose



New Guidall "400" Series

NEW GUIDALL "400" SERIES with bearings rotating on inner race for 167% greater efficiency. Higher speeds and heavier loads than ever possible before.

FAMOUS MICRO-PRECISION GUIDE SERIES require only one set of support blocks for maximum support. Sizes to fit any saw.

NEW ZEFYR BALL BEARING GUIDE WHEEL fits all standard #1 and #0 guides. Has honed, perfectly balanced raceways. Higher speeds, heavier loads, longer life.

NEW BRONZITE Micro-Precision Guide made entirely of non-ferrous materials — cannot spark or rust.

NEW UNIVERSAL MOUNTING BRACKETS for Carter Guides on any machine.

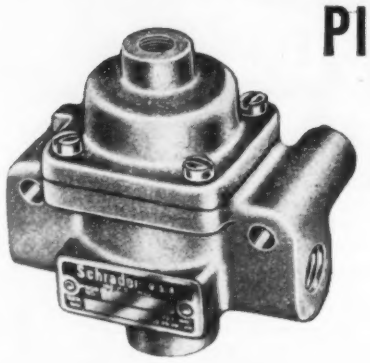
Micro-Precision Guide Series

FREE CARTER BAND SAW GUIDES CATALOG and OPERATING INSTRUCTIONS MANUAL. Write us at: 421 William Alden Smith Building, 30 Ionia, S.W., Grand Rapids 2, Michigan

CARTER PRODUCTS COMPANY, Inc.

▲ For more details circle NED-353 F8 on enclosed inquiry slip ▲

NEW THREE-WAY PILOT AIR VALVES



. . . Complete new line
. . . Normally open or normally closed types
. . . May easily be converted to solenoid type

Ideal for operating single-acting cylinders. 1/4", 3/8", 1/2", 3/4" and 1" N.P.T. port sizes. Compact size, sturdy construction and simplicity of parts assure long service life and neat air system hookups. Choice of actuating valves to load and relieve pilot can be made from Schrader's many 3-way valves. Flow capacities 60 to 400 cu. ft. per minute.

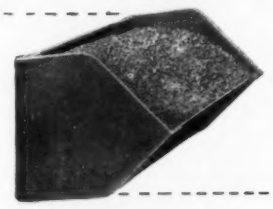
Send for informative literature on these and all your air control needs. Schrader, maker of the most complete lines of air products in the world, has all the answers.

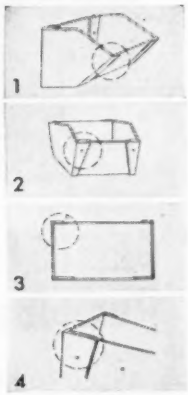
Schrader®

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Inc.
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

▲ For more details circle **NED-354 F8** on enclosed inquiry slip ▲

LINK-BELT "HS" elevator buckets





4 ways stronger

(1) Reinforced corners. (2) Rigid crimped backs. (3) Body and end plates of same gauge steel. (4) Double-thick metal for end bolt holes. You get all these long-life features with Link-Belt "High-Speed" buckets. Ideal for handling fine, free-flowing, granular materials. For facts, write for your copy of Folder 2548-A.

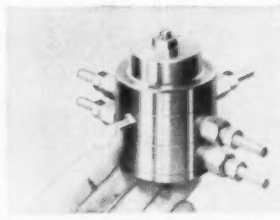
LINK-BELT

"HS" ELEVATOR BUCKETS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14.408

▲ For more details circle **NED-355 F8** on enclosed inquiry slip ▲

PNEUMATIC CONTROL monitors air signals



This Mite-73 monitor instrument is designed to trip when a pneumatic signal violates its minimum or maximum setting. It remains tripped after the signal is restored to normal limits until manually reset, either locally or remotely. Control is available in anodized aluminum, brass, or 18-8 stainless steel and is built for maximum pressures of 250 psi. Minimum trip pressure is adjustable from 1 to 100 psi. Made by **George W. Dahl Co.**, 86 Tupelo St., Bristol, R. I.

▲ For more details circle **NED-357 F8** on enclosed inquiry slip ▲

PLASTIC PARTS & MODELS designed and produced to order

One-of-a-kind prototype models for display or demonstration and limited - quantity parts, tools, and checking fixtures can be designed and produced on a custom basis by this plastics - working firm. Plastic signs and displays, silk screened in any color or design, can also be produced in any quantity. Small plastic parts, rings, insulators, and other components can be precision-machined to specifications. A clear plastic demonstration model of a horizontal gas pipe cleaner is shown. Made by **Production Aid, Inc.**, Dept. 10, Middletown, Ky.

▲ For more details circle **NED-358 F8** on enclosed inquiry slip ▲

IRREGULAR AREA MEASURING method uses transparent film overlay

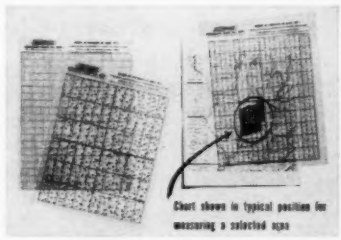


Chart shown in typical position for measuring a selected area

Rapid, accurate measurement of irregularly shaped areas on maps, drawings, charts, photographs, and plane objects is possible with the Areagraph method. A transparent overlay film, printed with a pattern of grids and dots, is placed over the area to be measured. Dots falling within the area are counted and divided by a simple factor printed on the overlay. The answer is given in square inches. Overlays are available in sets of three, one chart for each of three predetermined degrees of accuracy—85, 90, and 97 per cent. They are made of durable, dimensionally-stable Mylar polyester film by **Charles Bruning Co.**, Dept. NEDI, 1800 W. Central Rd., Mount Prospect, Ill.

▲ For more details circle **NED-359 F8** on enclosed inquiry slip ▲

41 answers to... INDUSTRIAL MAINTENANCE CLEANING PROBLEMS

Write for Free Copy

MAGNUS CHEMICAL COMPANY
13 South Avenue, Garwood, New Jersey

Please send full information on industrial maintenance cleaning.

NAME _____
POSITION _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

INDUSTRIAL CLEANING DIVISION

magnus
CHEMICAL COMPANY INC.

magnus a world-wide organization specializing in cleaning and protection of all surfaces.

▲ For more details circle **NED-356 F8** on enclosed inquiry slip ▲

YOUR BEST MOVE IS TO MOVE WITH

MERRILL

MATERIAL HANDLING DEVICES

For Interesting Information write

MERRILL BROTHERS
56-13 Arnold Ave., Maspeth, N. Y.

3-R-5

▲ For more details circle **NED-360 F8** on enclosed inquiry slip ▲

variable speeds direct from standard AC power lines ...with

U.S. VARIDRIVE MOTORS

Smooth, stepless speed changes to the split RPM—with the simple, completely self-contained U.S. VARIDRIVE MOTOR! Just plug into any standard AC power line.

Why bother with DC Converter, DC Generators, complicated electronic tubes and circuits that require special technicians? Why risk costly production shutdowns?

You avoid complications when you choose U.S. VARIDRIVE—dependable, simple, easy for ordinary personnel to maintain. Available in RATINGS 1/4 TO 60 H.P. Specify: "U.S. VARIDRIVE MOTOR."

U.S. ELECTRICAL MOTORS INC.

P. O. BOX 2058, LOS ANGELES 54, CALIF. OR MILFORD, CONN.

FREE COLOR-ILLUSTRATED BROCHURE ...Send for U.S. Varidrive Bulletin No. 1797

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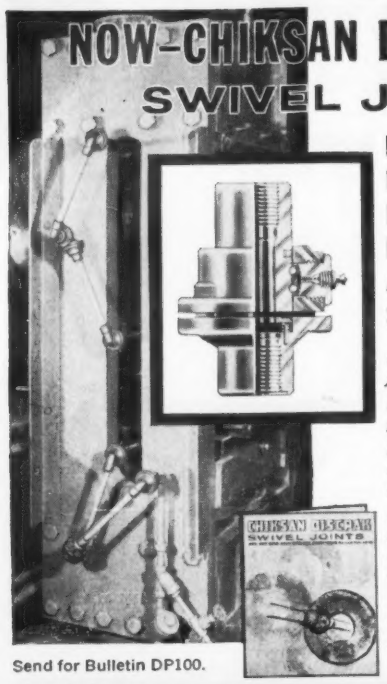
NOW-CHIKSAN DISCPAK SWIVEL JOINTS



INSURE SAFE, LASTING FLEXIBILITY FOR HOT GAS AND STEAM SERVICE LINES...

Replace packing with joint in the line—

Keeps line flexing in predetermined arc—

Free swiveling with extremely low torque—

Ideally suited on lines handling alternate steam and cold water flow—

Unlimited service life with minimum maintenance—

Send for Bulletin DP100.

CHIKSAN COMPANY

Brea, California; Chicago 5, Illinois; Newark 2, New Jersey
Subsidiaries: Chiksan Export Co., Chiksan of Canada Ltd.

▲ For more details circle NED-362 F8 on enclosed inquiry slip ▲

OHIO WELD NUTS

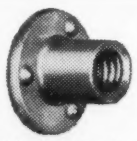
AS THE PRIMARY FASTENERS IN FASTENER ASSEMBLIES MEAN . . . .

- LIGHTNING-FAST APPLICATION BY RESISTANCE WELDING
- PRIMARY FASTENER PERMANENTLY POSITIONED—NO RETAPPING NECESSARY
- SPLIT-SECOND ASSEMBLY OF PRODUCT COMPONENTS—MADE POSSIBLE BY PRE-ATTACHED PRIMARY FASTENER

RN NUT OHIO'S newest weld nut with pilot and dual-line projections. Ideal in applications where tension is against the weld.

WS NUT For applications on rugged assemblies where it is necessary to anchor nut securely in blind location.

PN NUT Used where a pilot for easy locating, a strong weld and space limitations are important factors. Ideal for use in confined corners, flanges and narrow channels.



RH NUTS Used where it is desirable to have the body of the nut go through the sheet or where extra long thread engagement is needed.

WF NUTS Used where the nut serves a mounting purpose or greater thread engagement is required than is normally provided by other type weld nuts.

WW NUTS Used where a hermetic seal is required to prevent leakage of air, gas, water or dust on blind locations.

SN NUT Used where assemblies are being spot-welded together and a piloted nut is required.

ND NUT Used where a large nut is needed for bridging or joining two sheets or for extra strength.

OVER 50 YEARS OF BETTER FASTENING
SAMPLES AND INFORMATION AVAILABLE ON REQUEST

THE OHIO NUT & BOLT CO.
14 First Avenue • Berea, Ohio

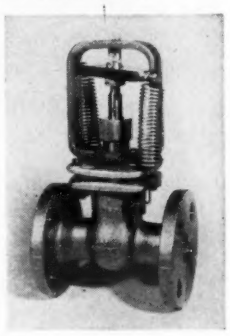
▲ For more details circle NED-363 F8 on enclosed inquiry slip ▲

CHANGEABLE SIGN
all-metal unit is shipped set up

All - metal Quick-Change sign which comes with a complete set of movable metal letters and numbers can be used to transmit safety campaign messages, employment notices, or public service messages. Signs are shipped completely set up, ready for installation and immediate use. They are attractive, long-lasting, and easy to use. Made by **Berloc Mfg. Co.**, Dept. 0-7, 13623 Crenshaw Blvd., Hawthorne, Calif.

▲ For more details circle NED-364 F8 on enclosed inquiry slip ▲

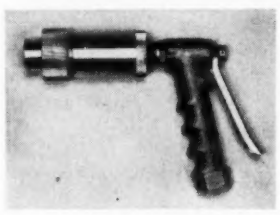
FIRE PROTECTION VALVE
shuts off combustible fluid flow



This stainless steel spring-loaded gate valve shuts off the flow of combustible fluids in plant areas where a fire has started. It has a special bonnet equipped with a fusible link and shuts off when temperature reaches link melting point of 160° F. Valve also features a rotating double disc assembly which assures a tight seal even if body distorts due to heat. Valve is available in Type 304, 316, and FA-20 alloys, as well as Monel and nickel, in sizes from ½ to 2 in. Operating pressures range up to 150 psi. Made by **Cooper Alloy Corp.**, Dept. NED, Bloy Street & Ramsey Avenue, Hillside 5, N. J.

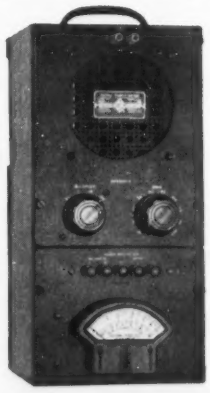
▲ For more details circle NED-365 F8 on enclosed inquiry slip ▲

AIR CLEANING GUN
creates a percussion air blast



Applicable to many industrial air blast cleaning operations, this Airnesco cleaning gun can be used with air alone, air and steam, or air and chemicals. Unbalanced pressure valves incorporated in the gun automatically open and close in ratio to losses in airline, about 65 times per second. This converts steady compressed air potential into a kinetic force of about 20 times the original pressure. Thus, an 80-psi air source produces the effect of 1600-psi. High frequency air shock waves blast through grease, dirt, and rust encrustations. Gun weighs 5 lb, and operates on 60 to 150-psi air pressures. Made by **L. C. Nesham Co.**, Dept. E, Box 641, Allentown, Pa.

▲ For more details circle NED-366 F8 on enclosed inquiry slip ▲



Direct-Reading Output-Power Meter for Audio Frequencies

0.2 mw to 100 Watts

★ Auxiliary db scale, with multiplier, reads −10 to +50 db above 1 mw reference level

★ Forty discrete impedances over range of 2.5 to 20,000 ohms

★ Input impedance within ±2% of indicated value over most of range

★ Indicated power is accurate to within ±0.25 db at full scale

★ Over-all frequency characteristic of power indication flat to ±0.5 db from 20 c to 10 kc; within ±0.75 db to 15 kc

Type 783-A Output-Power Meter: $370

Write for Complete Data

GENERAL RADIO Company

275 Massachusetts Avenue, Cambridge 39, Massachusetts, U. S. A.

Broad Avenue at Linden, Ridgefield, N. J. NEW YORK AREA — 1000 N. Seward St. LOS ANGELES 38
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1182 Los Altos Ave., Los Altos, Calif. SAN FRANCISCO — 6605 W. North Ave., Oak Park, Ill. CHICAGO
In CANADA: 99 Floral Parkway, TORONTO 15

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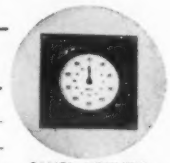
precision timers ...by STANDARD TRADEMARK

Industry's preferred "instrument of a thousand uses". Accurate, rugged, versatile STANDARD Elapsed Time Indicators. Synchronous motor drive. Electric clutch controlled by manual or automatic switch or output of electronic tubes. Manual or electric zero reset. Units for flush panel mounting or portable use.

Model	Scale Divisions	Totalizes	Accuracy
S-100	1/5 sec.	6000 sec.	±.1 sec.
S-60	1/5 sec.	60 min.	±.1 sec.
SM-60	1/100 min.	60 min.	±.002 min.
S-10	1/10 sec.	1000 sec.	±.02 sec.
S-6	1/1000 min.	10 min.	±.0002 min.
S-1	1/100 sec.	60 sec.	±.01 sec.
MST	1/1000 sec.	.360 sec.	±.001 sec.
MST-500	1/1000 sec.	30 sec.	±.002 sec.



PANEL MOUNTED

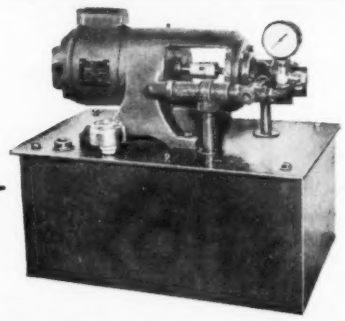
PORTABLE

Request Bulletin No. 198.

THE STANDARD ELECTRIC TIME COMPANY

89 LOGAN STREET • SPRINGFIELD, MASS.

▲ For more details circle NED-368 F8 on enclosed inquiry slip ▲



GENESEE Low Pressure Pumping Unit . . . . . .

This is a new heavier duty motor-pump combination. Definitely the answer to high-cost hydraulics. It can be used for (1) accurate control of machine motions and pressures; (2) converting existing air equipment to hydraulic; (3) pressure testing devices or wherever linear or rotary motions are required.

Its initial pumping unit cost is approximately half that of conventional high-pressure systems.

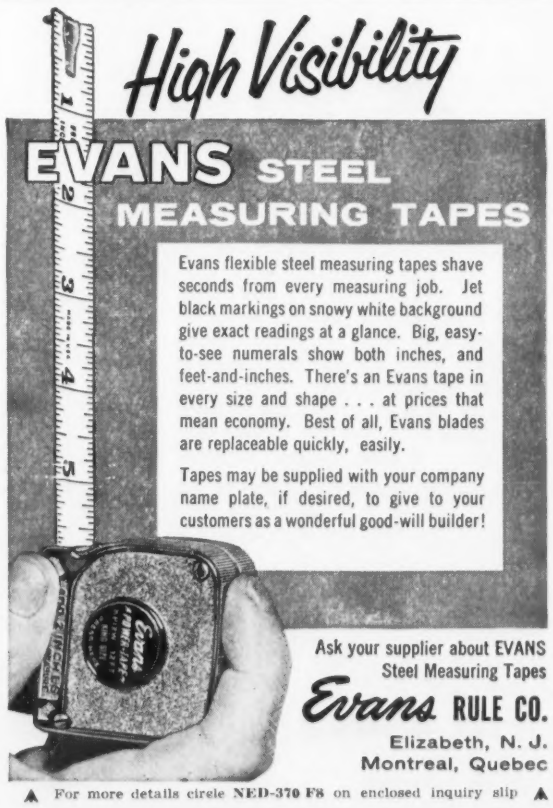
Five new models are available from stock, complete with motor, adjustable relief valve, pressure gage, oil level gage and piped return. They handle from 4 to 9 gal. per min.; HP ranges from ⅓ to 1.

GENESEE MACHINE BUILDERS, INC.
1731 HUDSON AVE., ROCHESTER 21, N. Y.

▲ For more details circle NED-369 F8 on enclosed inquiry slip ▲

High Visibility

EVANS STEEL MEASURING TAPES



Evans flexible steel measuring tapes shave seconds from every measuring job. Jet black markings on snowy white background give exact readings at a glance. Big, easy-to-see numerals show both inches, and feet-and-inches. There's an Evans tape in every size and shape . . . at prices that mean economy. Best of all, Evans blades are replaceable quickly, easily.

Tapes may be supplied with your company name plate, if desired, to give to your customers as a wonderful good-will builder!

Ask your supplier about EVANS Steel Measuring Tapes

Evans RULE CO.
Elizabeth, N. J.
Montreal, Quebec

▲ For more details circle NED-370 F8 on enclosed inquiry slip ▲

A CORROSION-PROOF THERMOSETTING COMPOUND FOR LINING

Chemical Storage Tanks • Processing Tanks
Pickling & Plating Tanks • Pits & Foundations

This new lining material resists the effects of alkalies, acids and solvents. COROLINE can be easily applied with trowel or brush in thicknesses ranging from 1/16" to 3/16". COROLINE can be applied by the customer or by Ceilcote personnel in the field or factory.

Write today for the COROLINE TECHNICAL BULLETIN

COROLINE CEILCOTE

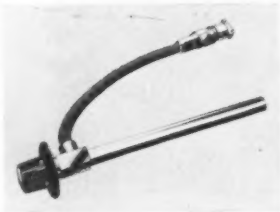
THE CEILCOTE CO., Inc.
4838 Ridge Road • Cleveland 9, Ohio

•Birmingham, Alabama • Buffalo, New York • •Chicago, Illinois • •Cleveland, Ohio • •Detroit, Michigan • Evansville, Indiana • •Houston, Texas • Kansas City, Missouri • Los Angeles, Calif. • •San Francisco, California • Seattle, Washington • Springfield, Massachusetts •Warehousing

9018-CC

▲ For more details circle NED-371 F8 on enclosed inquiry slip ▲

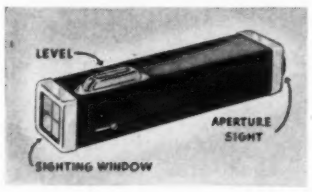
MULTIPURPOSE THERMOSTAT usable under corrosive conditions



General purpose Model 17502 Thermoswitch can be changed from one process or experiment to another without loss of sensitivity, inasmuch as it is made of Type 316 stainless steel. This material resists acetic acid vapors, 5 per cent sulfuric acid solutions, and many other salts and acids. Unit is Heliarc welded to prevent electrolysis and has a corrosionproof armored cable over the lead wires. Stem length is 7 19/32 in. A dial and knob facilitate setting over a −100 to 600° F range. It is rated 10 amp, 115 v ac, noninductive. Either make or break contact action on temperature rise is available. Made by **Fenwal Inc.**, 70 Pleasant St., Ashland, Mass.

▲ For more details circle NED-374 F8 on enclosed inquiry slip ▲

SIGHTING LEVEL is accurate within 1/3 degree



Used like a telescope, this hand sighting level is manipulated until bubble, reticle, and object are coincident to determine exact eye level. It provides a level line of sight for laying out building lines, grades, fence lines, and other installations in construction and building maintenance. Instrument is accurate within ⅓ degree. Differences in elevation between two points can be accurately measured with the pocket level. Price is $2.50. Made by **Edmund Scientific Co.**, 180 E. Gloucester Pike, Barrington 25, N. J.

▲ For more details circle NED-375 F8 on enclosed inquiry slip ▲

INDUSTRIAL ASH TRAY may be finished in any color

Permanent - mounting Model 4J Sipco Dunking Station, a cigarette dousing station for in-plant use, can be ordered with the conservative decal shown, or without decals, if desired. Three new message signs are also available. Stations have black crinkle or brightly polished finishes, and can be finished in any specified color. The glass fiber inner liner supplied with the Model 4J is available as a separate item for use in any Jumbo size Sipco canister to minimize cleaning time. Made by **Standard Industrial Products Co.**, Dept. D, 920 N. Garfield Ave., Peoria, Ill.

▲ For more details circle NED-376 F8 on enclosed inquiry slip ▲

Easily Cuts
10-Gauge Stainless
8-Gauge Mild Steel
3/16" Aluminum and
All Non-Ferrous Metals
Without Distortion

FENWAY NIBBLERS

Will Not Bend or Curl Metal
Lightweight Fully Portable

Models Available to Do Every Cutting Job

Cuts Any Shape, Including Corrugated Metal Without Distortion
PAT. #2278174 #7278311 #2535631

Get a Free
On The Job Demonstration

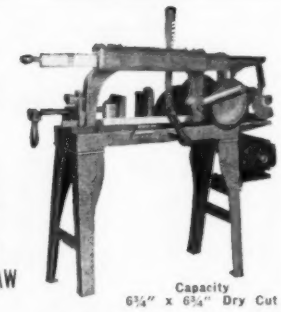
3107 N. Broad St.
Philadelphia 32, Pa.

FENWAY
Machine Company, Inc.

▲ For more details circle NED-378 F8 on enclosed inquiry slip ▲

IN A CLASS BY ITSELF

NO. 3B KELLER POWER HACK SAW



Capacity 6¾" x 6¾" Dry Cut

MOST POPULAR of the 10 Standard Keller Power Hack Saws. Model 3B is built-for-the-job and delivers top-quality "Productionline" cutting. Its wide capacity handles squares, rounds, and pipe up to 6¾ x 6¾ inches.

Check the many features for fast accurate cutting and longer life . . . Quick-acting Swivel Vise, Automatic Stop Switch. Adjustable Bronze Bearings for guide bar in saw frame. Automatic life and "Oilite" Bearings throughout.

A KELLER Saw for you . . . 5 Capacities, 10 Models, 4" x 4", 5" x 5", 6¾" x 6¾", 8½" x 8½", and 10½" x 9".

Write for Bulletin Number 257 for complete information.

SALES SERVICE MACHINE TOOL CO.
2365 University Ave., St. Paul 14A, Minn.

KELLER Power HACK SAWS

Builders of Power Hack Saws since 1931

▲ For more details circle NED-372 F8 on enclosed inquiry slip ▲

high production, single surface grinding

Gardner #122
Semi-Automatic Single Spindle Grinder

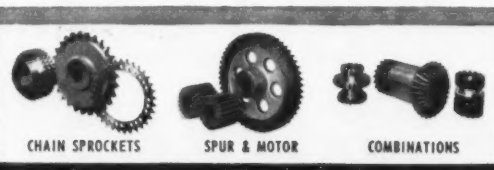
Power operated work carrying fixtures provide high output at low cost.

Send for catalog on full line of Gardner Grinders.

GARDNER
precision disc grinders

GARDNER MACHINE COMPANY
460 Gardner St.
Beloit, Wisconsin

▲ For more details circle NED-373 F8 on enclosed inquiry slip ▲



GREAVES GEARS
Manufactured to your specifications or samples

GEARS • SPROCKETS • RACKS • LEAD SCREWS
Cast Iron, Steel, Bronze — Plain or Heat Treated
All Types of Non-Metallic Materials

For prompt estimates, write or wire TODAY!
GREAVES MACHINE TOOL CO.
2302 Eastern Avenue Cincinnati 2, Ohio

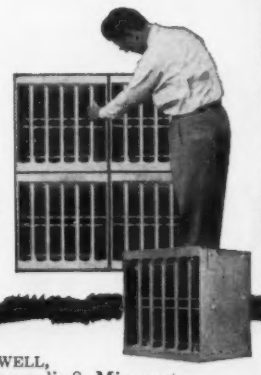
▲ For more details circle NED-377 F8 on enclosed inquiry slip ▲

HONEYWELL'S ELECTRONIC AIR CLEANER

ends processing problems caused by air-borne dust, abrasives, soot, smoke and grime

These costly microscopic spoilers never get a chance to ruin the work when Honeywell's Electronic Air Cleaner is on the job. It electronically traps particles so small they are visible only through an electron microscope—outperforms ordinary mechanical air filters six to one! Saves cleaning and painting costs, too. Modular construction; easy to install. Fill out coupon for complete details.

SOON PAYS FOR ITSELF IN...
- film and data processing
- lens grinding
- furniture finishing
- electronic tube manufacturing
- constant temperature and humidity rooms
- switch and relay rooms
- broadcast transmitters
- many other applications



MINNEAPOLIS-HONEYWELL,
Dept. NW-6-72, Minneapolis 8, Minnesota
Please send free copy of Electronic Air Cleaner booklet, "A Close Look At Air-Borne Dirt."
We have the following problems:_____

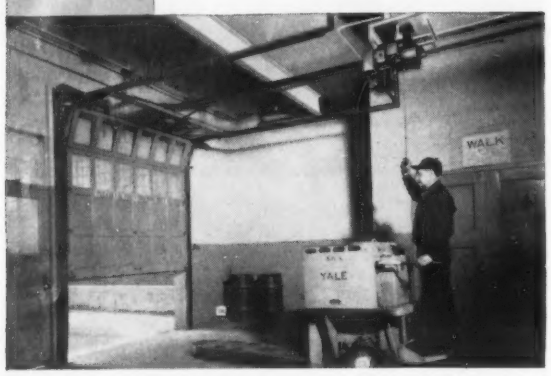
*Name*_____
*Company*_____
*Address*_____
*City*_____ *Zone*____ *State*____

▲ For more details circle NED-379 F8 on enclosed inquiry slip ▲

THE MARK OF QUALITY
BARBER COLMAN

Barcol® Door Operators

Pull switch saves man-hours and heat



Ask for Savings Bulletin

Open-door time is minimized, traffic kept moving. Also available with radio control installed on trucks. New booklet and computation show *how much* Barcol features save. Barber-Colman makes operators for overhead, swinging or sliding doors, and sliding gates. Your Barcol distributor sells, installs, guarantees, and services — look under "Doors" in phone book.

See catalog 7c/8a Sweet's Plant Engineering File.

BARBER-COLMAN COMPANY
Dept. S86 ROCKFORD, ILLINOIS

▲ For more details circle NED-380 F8 on enclosed inquiry slip ▲

dependable

ANCHOR VERTICAL SPEED REDUCERS

Designed specifically for conveyor applications requiring a vertical output shaft (up or down), and extended bearing housing for high overhung load, ANCHOR Reducers feature readily accessible helical gears for ratio changes. Available from stock in six sizes, ratios up to 1800:1. Write for Bulletin 57-1.

ANCHOR STEEL & CONVEYOR CO.
6906 KINGSLEY AVE. DEARBORN, MICHIGAN

▲ For more details circle NED-381 F8 on enclosed inquiry slip ▲

FICTION and FACT

FICTION: Conversion From Dry Booth to R P Paint Arrestor Equipped Paint Spray Booths is Complicated.

FACT: R P Paint Arrestors are Basically Air Filters and are as Easy as Filters to install.

Photo Courtesy Consolidated Freightways, Chicago

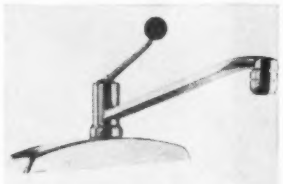
RP
PAINT ARRESTORS

R P Paint Arrestors require no special construction and can be installed in any dry-type spray booth...quickly and simply. They can be mounted in vertical, horizontal or "V" banks... and require no plumbing, pumps nor special wiring. Maintenance costs are low, too, involving only the replacement of economical Paint Arrestors. To reduce down-time, save floor space, increase paint spray booth efficiency, write for complete information on R P Paint Arrestors.

Products of Research RP
RESEARCH PRODUCTS Corporation
Dept. 32 Madison 10, Wis.

▲ For more details circle NED-382 F8 on enclosed inquiry slip ▲

ONE-HANDLE FAUCET
for institutional or plant washrooms

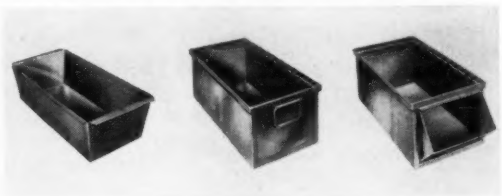


To withstand the severe service common to plant and institutional installations, this Series 52 one-handle faucet has triple chromium plated exterior and stainless steel working part. Body and other parts are heavy gage brass. Moving handle up and down controls rate of flow, whereas swinging it left to right varies flow temperature from hot to cold. Jamproof operation, double-seal design to eliminate leaks, and pressure-assisted closing are featured. Made by **Moen Faucet Co.**, 205 Woodland Ave., Elyria, Ohio.

▲ For more details circle NED-383 F8 on enclosed inquiry slip ▲

STEEL TOTE BOXES
nesting and stacking types offered

Nesting type (left), closed stacking type (center), and stacking hopper type (right) are three steel tote box types offered for work handling and storage. Nesting unit measures 22 x 11 x 6 in., and the other two types are 20 x 10 x 8 in. All have reinforced corners and supporting rails in a welded assembly. Closed stacking type has drop handles on both ends and the stacking hopper type has a drop handle on one end and a rounded top rail for a handle on the other end. All types are available unpainted or finished green. Made by **Angle Steel Inc.**, Dept. N, Plainwell, Mich.



▲ For more details circle NED-384 F8 on enclosed inquiry slip ▲

WORK GLOVES
have leather palms, seamless thumbs

Seams are eliminated from work-contacting surfaces on or between thumb and forefinger by virtue of the Nu-Wing seamless thumb incorporated in these Boss work gloves. This feature contributes to long, uniform wear and resistance to hot metal and sharp or abrasive materials. Seamless thumbs are offered in two heavy duty leather palm types with safety cuff or gauntlet in each type. Made by **Boss Mfg. Co.**, 223 W. First St., Kewanee, Ill.

▲ For more details circle NED-385 F8 on enclosed inquiry slip ▲

The **BECO**

Super Lift
LEVER DOLLY

- Why Pay More!
- Guaranteed
- Stronger
- Safer

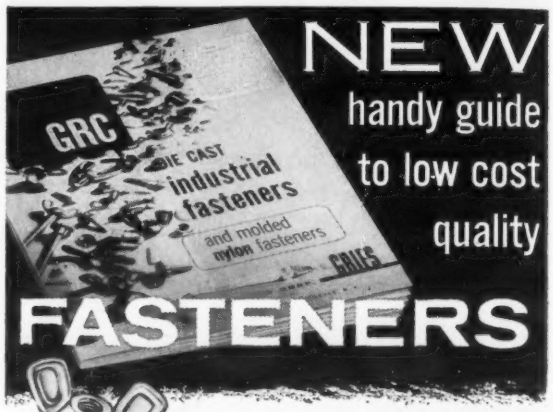
- For immediate shipment, wire phone, or pin this ad to your letterhead and mail to:

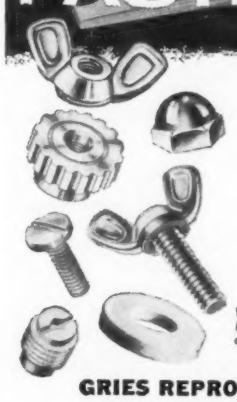
BECO - Bettendorf, Iowa

Four Models ● Metal or Rubber Wheels

▲ For more details circle NED-386 F8 on enclosed inquiry slip ▲

NEW handy guide to low cost quality FASTENERS





Die Cast Zinc Alloy Wing, Cap, Thumb Nuts ● Thumb & Wing Screws ● Molded Nylon Screws ● Washers ● Screw Insulators

GRC catalogs the widest range of stock styles, types, sizes and threads from one source . . . charts the dimensions of each style, type and size . . . illustrates them all with photographs and schematic drawings. Detailed are uses, physical properties of zinc alloy and nylon, the many advantages of GRC fasteners . . . produced in one high speed automatic operation to assure quality fasteners at lowest cost.

Write, wire, phone RIGHT NOW for your copy of GRC's new Fastener Bulletin.

GRIES

GRIES REPRODUCER CORP.
World's Foremost Producer of Small Die Castings
143 Beechwood Avenue, New Rochelle, N. Y. • NEw Rochelle 3-8600

▲ For more details circle NED-387 F8 on enclosed inquiry slip ▲

Save! **WITH AJAX SALT BATH**

HEAT TREATING

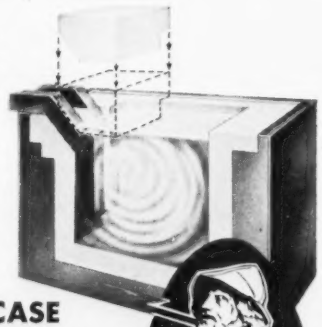
HARDEN STEEL 4 TO 6 TIMES FASTER!
. . . with positive protection against scale or other surface defects . . . in less space . . . with equipment costs only a fraction of those of other heat treating methods.

REDUCE YOUR CLEANING, DESCALING, DESANDING COSTS!
Clean, scale-free surfaces obtained faster . . . at appreciably less cost . . . Negligible metal loss . . . More work handled in less time.

BOOST ALUMINUM BRAZING OUTPUT!
Dip brazing in Ajax Salt Baths speeds production —cuts costs—puts the fabrication of even highly complicated aluminum assemblies on a low cost mass output basis.

SAVE ON CARBURIZING!
(and *case hardening*)
Ajax Salt Baths give you far faster heating, closer control, minimized distortion, elimination of pitting and spalling, easy selective carburizing and other advantages — PLUS far lower equipment costs. No skilled labor is required.

The most efficient heat treating principle for a wide variety of work... Pioneered by Ajax in the largest line of furnace types and sizes for modern production needs.



WRITE FOR CASE HISTORY BULLETINS!
(Specify those desired)

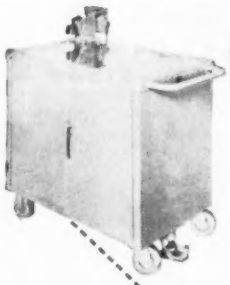
- ☐ Hardening ☐ Annealing
- ☐ Martempering—Austempering
- ☐ Aluminum Brazing
- ☐ Cleaning, Descaling, etc.
- ☐ Carburizing, Cyaniding ☐ Other

AJAX ELECTRIC COMPANY
103 Allen Street
PHILADELPHIA 23, PA.

Associates: Ajax Electrothermic Corp.
Ajax Engineering Corp.

AJAX HULTGREN
SALT BATH furnaces
Internally heated. Electric and gas-fired types

▲ For more details circle NED-388 F8 on enclosed inquiry slip ▲



here today...

Portable workbench can be rolled to work location by one man. Doors can be locked to fully protect all contents. Unit is all-welded 1/8-inch and 3/16-inch steel plate construction . . . and can support up to 2000-pounds safely. Heavy-duty roller bearing wheels (hard rubber or phenolic resin) are furnished. Foot-operated locking mechanism securely positions workbench.

Standard "Roll-A-Bench" weighs 325-pounds and is 34-inches high, 41-inches long and 26-inches wide. Other sizes are available to meet individual requirements. *Write* today for literature.

there tomorrow!

Overbeke-Kain

MOBILE WORKBENCH

Several territories available for qualified manufacturer's representatives or distributors. Write today for information.

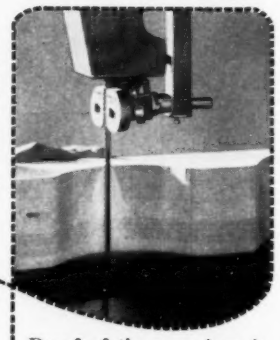
6755-OK

THE OVERBEKE-KAIN COMPANY
20979 Aurora Road • Bedford, Ohio

Overbeke-Kain

▲ For more details circle **NED-389 F8** on enclosed inquiry slip ▲

25% to 40% faster cutting



Hundreds of industrial plants report actual increased sawing production of 25% to 40% and a higher quality work with use of Foley precision saw filing equipment. They get longer saw life, less breakage and lower maintenance costs. One firm reports an annual saving of $350.00.

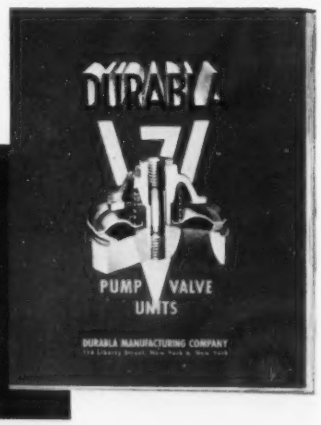
if you use saws, send for this FREE BOOK

Proof of these savings is in a helpful 56 page book we have for you. This free book is based on many years' use of Foley Saw Filers in thousands of plants. It contains pictures and detailed data on how these firms save money—how you can benefit. Request Manual No. 100; no obligation.

FOLEY MANUFACTURING CO.
3323 N. E. 5th St. • Minneapolis 18, Minn.

▲ For more details circle **NED-390 F8** on enclosed inquiry slip ▲

DATA you need



to select improved valves for your pumps

Famous for sustained efficiency under widely varied service conditions, DURABLA Pump Valve Units have been redesigned to incorporate a new taper-lock* stud, self-locking nut and drop-on guard. This improved design offers *seven new points of superiority.*

The booklet shows how DURABLA Pump Valve Units can benefit your pumps. Includes design details, materials available, table of seat sizes and dimensions. Send for free copy of Form 400 NED68.

DURABLA MANUFACTURING COMPANY
114 Liberty Street, New York 6, N. Y.

DURABLA®

*Patent Pending

▲ For more details circle **NED-391 F8** on enclosed inquiry slip ▲

LABORATORY DRYING OVEN
temperatures constant to 200° C

Suited for drying, baking, annealing, sterilizing, evaporating, and heat treating, this constant temperature laboratory oven is thermostat controlled in the range of ambient to 200° C. Shelves are adjustable every ½ in. Features include induced air circulation, red pilot light to show heater action, non-marring rubber feet, explosionproof door latch, sensitive stem thermometer, and 6-ft cord and plug. Selling for $55, it is available for 110 or 220-v operation. Made by **Grieve-Hendry Co.**, 1408 W. Carroll Ave., Chicago 7, Ill.

▲ For more details circle **NED-392 F8** on enclosed inquiry slip ▲

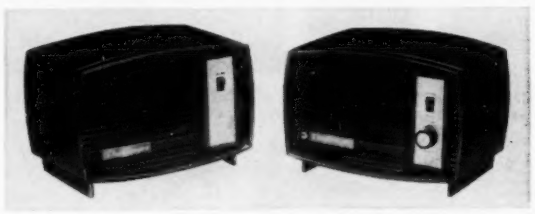
SCREW-HOLDING DRIVER
holds and tightens tiny screws

Slight pressure on the swivel end of this automatic screw-holding driver actuates its mechanism for holding and tightening tiny screws with 0.010 to 0.031-in. slots. Bits of various sizes hold different size screws, including No. 2 to 6 Reed & Prince. The driver automatically releases and resets as the screw is tightened. Replaceable, resharpenable, interchangeable bits of tool steel are offered in 0.75 and 2.75-in. lengths. Made by **Hodat**, Dept. N, 1025 Bush St., San Francisco, Calif.

▲ For more details circle **NED-393 F8** on enclosed inquiry slip ▲

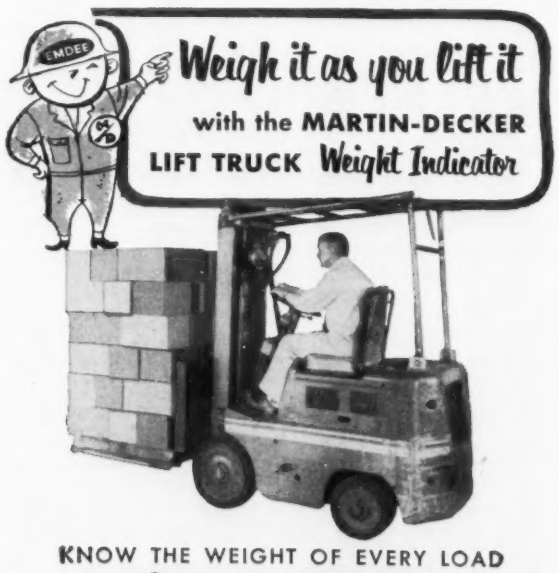
LOW-COST INTERCOM
system consists of two stations

Adaptable for business office and intraplant use, this Challenger Twosome two-station intercom system is easily installed. The Master station has a talk-listen



switch and a volume control which also regulates the remote station. The remote unit has a talk-listen switch and a privacy control. System includes 45 ft of wire, and up to 250 ft of additional wire can be used. Price complete is $39.95. It operates on 117 v ac-dc. Made by **David Bogen Co.**, Box 500, Paramus, N. J.

▲ For more details circle **NED-394 F8** on enclosed inquiry slip ▲



KNOW THE WEIGHT OF EVERY LOAD

As you lift it!

Here's the accurate, convenient, safe low-cost way to prevent overloads—totalize truck car loadings—simplify weight inventories—insure floor weight distribution—

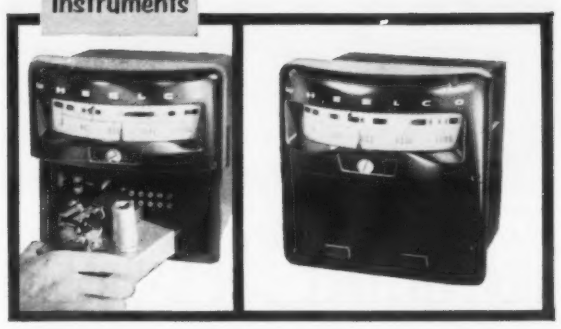
Write for Descriptive Bulletin. S-25

MARTIN-DECKER CORP.
HOME OF THE WEIGHT INDICATOR — LONG BEACH, CALIFORNIA

▲ For more details circle **NED-395 F8** on enclosed inquiry slip ▲

THE MARK OF QUALITY
BARBER COLMAN
Wheelco Instruments

Complete control versatility offered by Series 400 Capacitrols

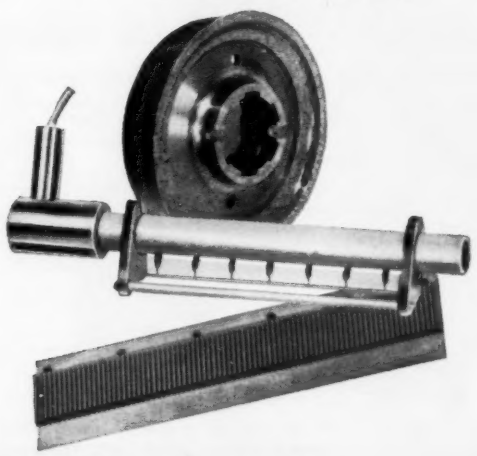


Just "plug in" the right chassis into the Wheelco 400 Series Capacitrol to get any of these six control forms: Two-position (on-off), time-proportioning, multi-position, two-position (heavy-duty), simplified form proportioning, or electric proportioning "stepless" control. You get rugged dependability and easy maintenance, too! Get details by writing for Bulletin F6314-3.

BARBER-COLMAN COMPANY
Dept. F, 1514 Rock Street, Rockford, Illinois

▲ For more details circle **NED-396 F8** on enclosed inquiry slip ▲

NEED FABRICATED INDUSTRIAL PLASTICS?



You furnish the print... we'll furnish the part!

Laminated plastics are not difficult to machine but in our over 25 years of working with them we have acquired or invented many special techniques, machines and tools to do the job.

There are certain speeds, feeds, cutters, clearances, and allowances that work better with laminates. There are many little tricks and kinks for sawing, turning, drilling, milling, punching, and threading that help make a better product or save money.

If you gather from this that it might be well to let us handle the job from your print to part, you're right.

In brief, Synthane is completely equipped to handle all of your fabricating problems.

SYNTHANE

SYNTHANE CORPORATION
N.E. River Road, Oaks, Pa.

☐ Please send me information about Synthane Fabrication Service.

Name _____

Address _____

City _____ Zone ____ State _____

▲ For more details circle **NED-397 F8** on enclosed inquiry slip ▲

Lifting problem? Transfer problem?

Automatic Tongs for Objects of All Shapes, Sizes

If it hangs from a crane...

HEPPENSTALL CAN HANDLE IT

Eliminate production bottlenecks—Heppenstall Tongs speed work from one operation to the next, hold it at advantageous working angle, carry finished products to shipping or storage areas. *Conserve space*—Heppenstall Tongs permit close, high stacking of raw materials and finished inventory with minimum aisle space.

Send today for additional information on Tongs for every lifting operation, or tell us your special problem and we'll help you with custom designs.

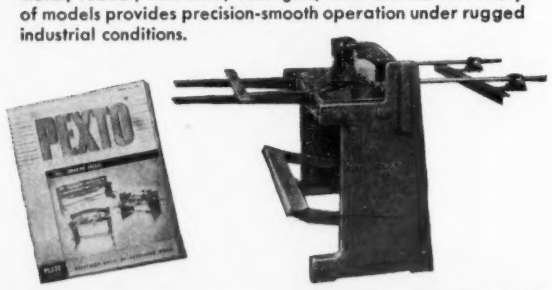
HEPPENSTALL COMPANY
501 Sixteenth Street, New Brighton, Pa.

For more details circle **NED-398 F8** on enclosed inquiry slip

PEXTO

SQUARING SHEARS for Industry

PEXTO industrial shears, power- and foot-operated, easily and accurately cut sheet materials such as plastic, fiber, metal, rubber, insulation, Fiberglas, and textiles. A variety of models provides precision-smooth operation under rugged industrial conditions.

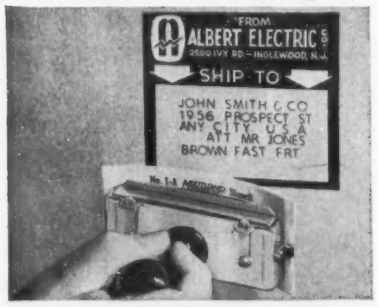


Send for new Foot and Power Squaring Shear Bulletins Nos. 57 and 157.

THE PECK, STOW & WILCOX COMPANY
SOUTHINGTON, CONN. U. S. A.

For more details circle **NED-399 F8** on enclosed inquiry slip

MULTISTAMP STENCIL DUPLICATOR — Used In Leading Plants All Over the World



The Quick.. Accurate Way to Address Shipping Cartons

VOLUME MARKING

Print shipping information direct on cartons, boxes, packages. Get 1,000 or more clear, sharp impressions from one stencil without re-inking. FORM-CUT® Stencil has facsimile of your label or shipping form die-impressed into the stencil . . then type or write in address or identification data . . attach to duplicator . . and print. Write for literature and free sample FORM-CUT stencil.

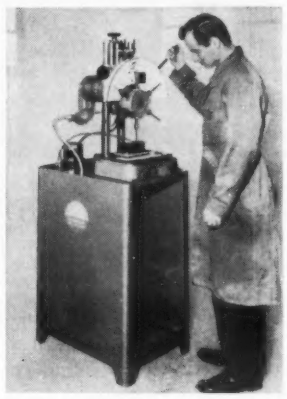
THE ORIGINAL HAND STAMP STENCIL DUPLICATOR

Model 1A shown in use above, complete with supplies in sturdy case, $12.50 f.o.b. factory. No. 3 Outfit (at right) $19.50 f.o.b. factory. Also ideal for addressing shipping tags, labels. Prints forms, bulletins, post cards, etc. At office and shipping room supply dealers.

OVER 35 YEARS **MULTISTAMP** STENCIL DUPLICATOR®
THE MULTISTAMP CO. NORFOLK, VA.

For more details circle **NED-400 F8** on enclosed inquiry slip

FLOOR MODEL TURRET DRILL
has 6-station self-indexing turret and machines ¼-in. holes in steel

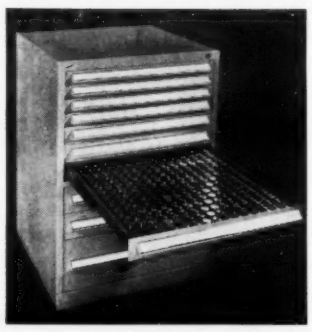


Six different operations can be performed with 6-station self-indexing turret of this floor model turret drill. Machine will drill, tap, counterbore, ream, or otherwise machine holes up to ¼-in. diameter in steel. As head reaches top position on vertical columns, indexing is triggered automatically. Each spindle, however, can be made to repeat any number of feed strokes without indexing.

Only the spindle in use rotates, and each operates at its own preselected speed, ranging from 350 to 6200 rpm. Two-step pulleys on motor drive produce two complete speed ranges on each spindle. Drill is mounted on an enclosed pedestal equipped with pump and reservoir coolant system, and a sliding drawer. Pedestal height is 36 in. and over-all machine height is 64½ in. Made by **Burgmaster Corp.**, Dept. N, 13226 S. Figueroa St., Gardena, Calif.

For more details circle **NED-401 F8** on enclosed inquiry slip

CABINET STORAGE SYSTEM
modular cabinets can up tool and part storage capacity 50 per cent



Engineered metal storage cabinets, designed on a modular concept, can increase part, tool, instrument, or assembly storage capacity up to 50 per cent. In the system, all stored parts are immediately available for use or visual inventory. All drawers in a bank of cabinets can be locked with turn of one handle, protecting the contents against pilferage.

Cabinets are made in a number of heights, but in standard dimensions to afford interchangeability of drawer sizes, as required. Cabinet housings range from bench level to 10 ft high. Carrying capacity is up to 400 lb per drawer. In 25 sq ft of floor space, it is possible to store up to 24,000 lb of materials, with all items accessible. A fully loaded, fully extended drawer can support the weight of a man. Drawers are mounted on carriage frame which rides on ball bearing slides to provide double extension feature. Made by **Vidmar, Inc.**, Dept. NED, 222-34 96th Ave., Queens Village, L. I., N. Y.

For more details circle **NED-402 F8** on enclosed inquiry slip

TRENT PACKAGED CIRCULATION HEATERS

for Water, Oil, Brine, Air and Various Gases

- Water—Superheat
- Oil, Oil Burners, Heat Transfer Liquids
- Brine, Defrost Applications
- Air, to High Temperatures—Test Work
- Gases, Hydrogen, Nitrogen, etc.

The unique design of TRENT "Packaged" Circulation Heaters *eliminates* return bends in the heating tubes . . . to assure free, uninterrupted flow of liquid through the heater—at the *exact* velocity you require! This means faster, more efficient heating for all types of process equipment.

TRENT SOH Oil Circulation Heater
TRENT SWH Water Circulation Heater
furnished fully equipped with

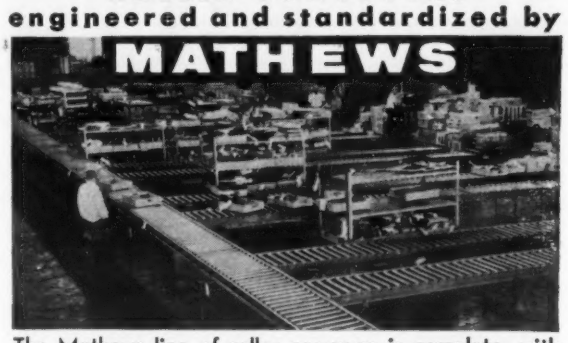
- All-Welded Companion Pipe Assemblies with Insulation
- Indicating or Non-Indicating Thermostats for High Temperatures
- Rugged Outer Casings with Mounting Tabs
- TRENT Multi-Tube Flanged Immersion Heater Unit
- Mounted 6" square Terminal Box

Let a TRENT engineer determine the TRENT "Packaged" Circulation Heater best suited for your operation . . . or custom-engineer one to meet your special wattage and voltage requirements.

TRENT INC. Electrically Heated Industrial Equipment
251 LEVERINGTON AVE., PHILA. 27, PA.
In Canada Supreme Power Supplies Limited, Toronto 14

For more details circle **NED-403 F8** on enclosed inquiry slip

a complete line of ROLLER CONVEYERS engineered and standardized by



The Mathews line of roller conveyer is complete, with rollers ranging from 1⅜" to 6½" in diameter, and with capacities from 60 lbs. to 13,000 lbs. High quality ball bearings are used throughout.

Accessories such as turntables, hinges and switches are available from stock.

A full line of couplings and supports makes the installation of Mathews Roller Conveyer lines convenient and easy.

For latest information write for Catalog 156

MATHEWS CONVEYER COMPANY
GENERAL OFFICES . . . . . ELLWOOD CITY, PENNSYLVANIA
PACIFIC COAST DIV. . . . MATHEWS CONVEYER COMPANY WEST COAST, SAN CARLOS, CALIFORNIA
CANADIAN DIVISION . MATHEWS CONVEYER COMPANY, LTD., PORT HOPE, ONTARIO.

MATHEWS
Over Fifty Years of Leadership in Mechanized Handling

For more details circle **NED-404 F8** on enclosed inquiry slip

Kwik-Color Seal covers 800 sq. ft. per gallon

Kwik-Color Wax covers 1000 sq. ft. per gallon

Permanent color for concrete with KWIK-COLOR

Here's a new, easy way to add permanent non-fading color to your concrete floors, and eliminate concrete "dusting" forever!

KWIK-COLOR SEAL

A superior concrete beautifier and preserver made from an emulsified plastic resin. Odorless, non-inflammable, water resistant, easy to apply. Dries in 20 to 30 minutes. Busy floors are back in service within 2 hours after etching, sealing and waxing. Available in Tile Red or Light Gray permanent, non-fading colors.

KWIK-COLOR WAX

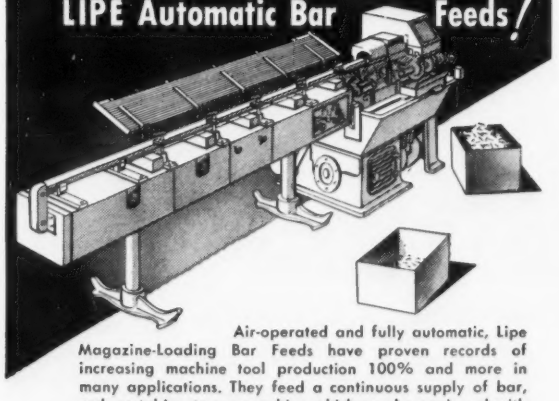
High gloss, waterproof emulsion wax for use over KWIK-COLOR SEAL to protect the seal during 14 to 20 day curing period. Highly water resistant, easy to apply. Dries in 20 to 30 minutes. Available in permanent, non-fading Tile Red or Light Gray colors.

MULTI-CLEAN *Method*

For more information, write . . .
MULTI-CLEAN PRODUCTS, INC.
Dept. NE-7-68, 2277 Ford Parkway, St. Paul 16, Minn.

For more details circle **NED-405 F8** on enclosed inquiry slip

Boost Output 30%-75%-100%- OR MORE With Amazing LIPE Automatic Bar Feeds!



Air-operated and fully automatic, Lipe Magazine-Loading Bar Feeds have proven records of increasing machine tool production 100% and more in many applications. They feed a continuous supply of bar, rods or tubing to any machine which can be equipped with a feed-length stop. Ideal for screw machines, turret lathes, centerless grinders, punch presses, thread rollers, etc.

SEND TODAY for free folder and complete details on how Lipe Automatic Magazine-Loading Bar Feeds can boost your production and profits.

Lipe-ROLLWAY CORPORATION SYRACUSE 1, N. Y.

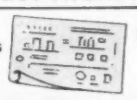
Manufacturers of Automotive Clutches and Machine Tools

For more details circle **NED-406 F8** on enclosed inquiry slip

Now you can stop costly, dangerous handling of heavy drums! Graco "direct-from-drum" Pumps are designed to pump fluids from your receiving entrance direct to point of use. Many plants are making tremendous savings by reducing drum handling to absolute minimum. "Move the contents, *not* the drum!"

GRACO *air-operated*
"DIRECT-FROM-DRUM" PUMPS

WRITE FOR SAMPLE DRAWING OF TYPICAL SET-UP.

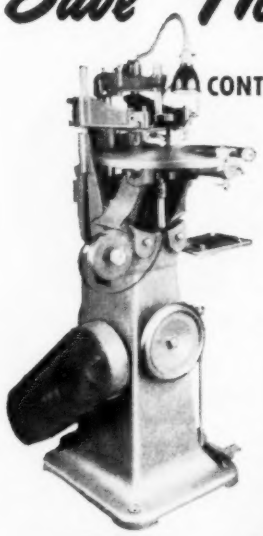


GRAY COMPANY, INC.
67 Graco Square
Minneapolis 13, Minnesota

FACTORY BRANCHES: New York (Long Island City) • Philadelphia
Detroit • Chicago • Atlanta • Houston • San Francisco
See your Graco Distributor

▲ For more details circle **NED-407 F8** on enclosed inquiry slip ▲

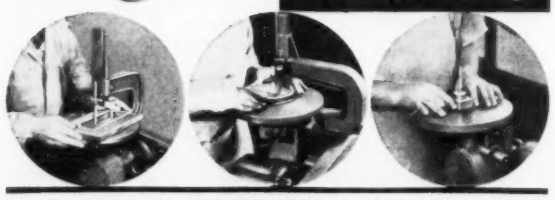
Save Hours **in tool rooms and die shops with CONTOUR SAWING AND FILING**



You can save real time and money in the production of parts for jigs and fixtures, dies, gages, templates and special machine production by using an Oliver of Adrian contour sawing and filing machine.

The Oliver is so simple to operate that all sawing, filing and lapping can be handled by an ordinary mechanic—saving a skilled die maker's costly time. Parts can be shaped to dimension faster, more accurately with no hand filing or semi-finishing operations. Available in five types – bench or pedestal. Write today.

OLIVER of ADRIAN
OLIVER INSTRUMENT COMPANY
1450 E. Maumee St. • Adrian, Michigan



▲ For more details circle **NED-408 F8** on enclosed inquiry slip ▲

Type 1 for steel
Type 23 for die castings

FREE!
TEST OFFER PROVES
NO TAPPING WITH
SHAKEPROOF
T. M. REG. U. S. PAT. OFF.
THREAD-CUTTING SCREWS

They actually *cut* their own mating thread in metal or plastic . . . just drill and drive! Because each screw remains in its own self-cut thread . . . tighter, stronger fastenings are certain!

SEND FOR FREE TEST KIT OF TYPE 1 OR TYPE 23 AND 25 NOW!

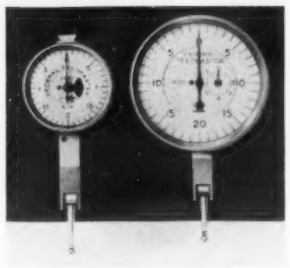
Type 25 for plastics

SHAKEPROOF
"Fastening Headquarters"
St. Charles Road, Elgin, Illinois

SHAKEPROOF
FASTEX
DIVISIONS OF ILLINOIS TOOL WORKS

▲ For more details circle **NED-409 F8** on enclosed inquiry slip ▲

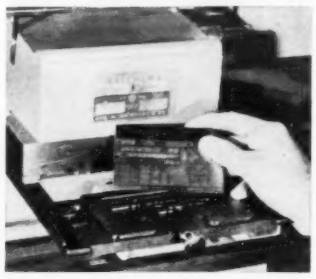
TEST INDICATORS
in 0.0001 and 0.0005-in. graduations



Swiss - made Testmaster test indicators are offered in both horizontal and perpendicular models with 1 and 1½-in. dial sizes. Of the eight models in the series, four have 0.0001 - in. graduations with a 0.032-in. range and four have 0.0005-in. graduations with a 0.060-in. range. Ball bearing pivots assure low-friction operation. Contact is clutch-mounted with 180-degree rotation. Marketed by **Federal Products Corp.**, 1118 NR1 Eddy St., Providence 1, R. I.

▲ For more details circle **NED-410 F8** on enclosed inquiry slip ▲

AUTOMATIC NAMEPLATE MARKER
indents 500 to 700 plates per hour



Pneumatically - operated and solenoid-controlled No. 222 nameplate marking machine roll-indents the marking and has a capacity of 500 to 700 plates per hour. Interchangeable, T-head designed type is contained in an inner chase which nests the nameplate. As master chase is moved into the machine head, a Micro-Switch actuates the pressure roll beneath the chase, impressing the type into all blank panels of the plate in one stroke. Type character sizes from 1/32 to ½ in. are available. Made by **Jas. H. Matthews & Co.**, 3943 Forbes Ave., Pittburgh 13, Pa.

▲ For more details circle **NED-411 F8** on enclosed inquiry slip ▲

NARROW-AISLE TRUCK
stacks 4000 lb as high as 192 in.

Heavy, redesigned uprights of this narrow-aisle electric truck have negligible deflection when lifting 4000-lb loads through a 192-in. range of elevation. Truck can operate in aisles as narrow as 78 in. Outrigger base legs and a 200-degree steering arc of its offset drive wheel make possible close-quarter maneuvering. Tractor covers can be fully opened on piano-style hinges to expose the power unit and controls for inspection or adjustment. Made by **Raymond Corp.**, 41-165 Madison Ave., Greene, N. Y.

▲ For more details circle **NED-412 F8** on enclosed inquiry slip ▲

NEW **J&J VERTILOK**

To provide greater locking strength, the J & J "Vertilok" side brake features a vertical cam action and a specially formed brake shoe which contacts the maximum tire tread area. A slight press of the toe and the wheel is securely locked . . . or completely released. Provision is made for adjustment of the braking action to compensate for wheel or tire wear. Simplicity of design and rugged construction assure long, trouble-free life.

SIDE BRAKE

for Medium Duty Plate Casters

Sold Through Quality Dealers

Jarvis & Jarvis, Inc.
PALMER, MASSACHUSETTS

Sales Representatives in Leading Cities Throughout the Country

IN CANADA: Jarvis & Jarvis of Canada, 1744 William St., Montreal, Que.

Suitable for all 4" to 6" rubber wheels, with hard or soft tread; steel disc replaceable tread wheels, 4", 5" and 6" diameter; also medium casters with standard 4" x 4" top plate.

▲ For more details circle **NED-413 F8** on enclosed inquiry slip ▲

This uncommon carrier . . .
is rapidly becoming the *common* answer to materials handling problems

HERE'S HOW DOUGLAS AIRCRAFT USES CONVOY #T-31 TOTE BOXES TO SPEED COMPONENTS TO ASSEMBLY

We make many standard size tote boxes . . . nesting, stacking and vertical sided . . . but we'll custom-make any box your product or use calls for.

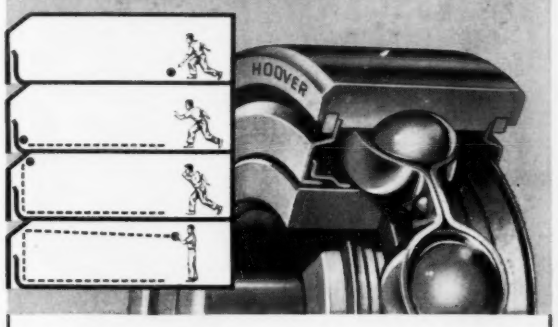
Special sizes and shapes are economically produced by our "Chem-Board" process of rigidizing hi-test corrugated board to remarkable strength.

More and more famous name industries are using Convoy Tote Boxes. Try us.

CONVOY, INC.
CANTON 6, OHIO
P. O. Station B, Box 216-N
GReenwood 7-4569

▲ For more details circle **NED-414 F8** on enclosed inquiry slip ▲

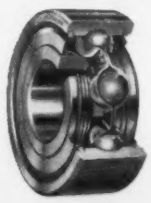
"Slinger Action" Circulates Locked-In Lube
in hoover cartridge bearings with dual labyrinth seals



Depend on Hoover to design a bearing that not only carries a lifetime supply of factory-selected, sealed-in lube, but also circulates the lube so effectively that maximum performance is assured for years. Hoover Dual Labyrinth Seals utilize centrifugal force to return lube again and again to the working surfaces. There is no chance for dirt to enter the bearing. Standard double row bearing width design assures extra large lube capacity. Standard bore and outside diameters simplify installation and replacement problems. Shields are easily removed for relubrication or servicing if required.

Hoover Cartridge Bearings are precision made with super smooth *Hoover Honed* Raceways and *Micro-Velvet* Balls, assuring high load capacity, smooth performance, hushed quietness.

Hoover Honed and *Micro-Velvet* are Hoover Trademarks.



hoover
BALL AND BEARING COMPANY
ANN ARBOR, MICHIGAN
Los Angeles Sales Office and Warehouse: 2020 South Figueroa, Los Angeles 7, California

Hoover Ball and Bearing Company, Ann Arbor, Michigan
Please send your new Bulletin 104, giving complete information on Hoover Cartridge Bearings.
Name
Title
Company
Address
City Zone State

▲ For more details circle **NED-415 F8** on enclosed inquiry slip ▲

Get the COUNT!

Durant Sales Engineers will supply a PRODUCTIMETER for every and any counting need in your plant.

Send for Bulletin #200

DURANT MANUFACTURING CO.
1922 N. Buffum St., Milwaukee 1, Wis.
22 Thurbers Ave., Providence 5, R.I.
Representatives in Principal Cities

PRODUCTIMETERS SINCE 1879 Count Everything

For more details circle NED-417 F8 on enclosed inquiry slip

PROTECTED

GORTITE

SLEEVES

BOOTS

Ask for new bulletin AH-3

A&A Mfg. Company Inc.
712 S. 12th St.
Milwaukee 4, Wis.

ALL SHAPES AND CONTOURS

For more details circle NED-418 F8 on enclosed inquiry slip

New Rotary Joint for Water Service

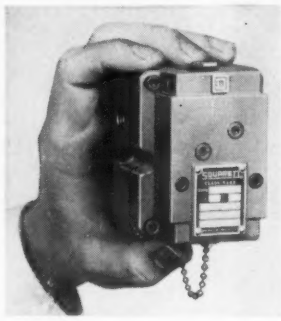
Smaller in Size, Weight and Price

Fits close quarters, tough service conditions on printing presses, calenders, waxers, embossers, ball mills, etc. No packing, no lubrication or adjustment, no external supports. Nickel-plated to resist rust, friction, wear. New special process makes seal rings harder, denser. Only 4 internal parts for easy field servicing. For all high speed service, pressures to 150 lbs. Six sizes: 3/8", 1/2" and 3/4" N.P.T. or 5/8", 3/4" and 7/8" N.F. Machine threads. Write for catalog information on new 4000 series.

THE JOHNSON CORPORATION
812 Wood St., Three Rivers, Michigan

For more details circle NED-419 F8 on enclosed inquiry slip

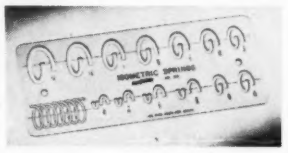
FOUR-WAY AIR VALVE actuated by rotary magnet



Usable with spot welders, pneumatic tools, and other air operated equipment, this four-way air valve has a rotary magnet which permits mounting in any position. Tested at more than 25 million operations, it has balanced internal pressure. Change of direction in air flow occurs in less than 1/2 cycle at 60-cycle frequency, and full 1/4-in. porting is provided. It meets JIC specifications. Optional manual operation is possible. Made by **Square D Co.**, 4045 N. Richards St., Milwaukee 12, Wis.

For more details circle NED-420 F8 on enclosed inquiry slip

ISOMETRIC SPRINGS TEMPLATE depicts 13 sizes from 1 1/4-3/8 in. OD



Made of 0.060-in. mathematical quality, green-tinted plastic, this 126 isometric springs template depicts 13 sizes of helical springs from 1 1/4 to 3/8 in. OD. Both inner and outer diameters of the spring can be drawn at the same time. Either left or right-hand wound springs can be drawn. Beveled cuts allow use with pencil or tubular inking pen. The 8 1/4 x 3 1/4-in. template sells for $3.00. Made by **Rapidesign, Inc.**, Box 429A, Burbank, Calif.

For more details circle NED-421 F8 on enclosed inquiry slip

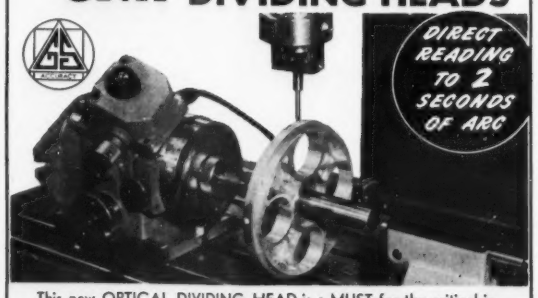
MIST COOLANT SYSTEM designed for use on drill grinders

Grinding wheel life is tripled on Black Diamond and Worcester drill grinders with the addition of this mist coolant system. The Spraymist packaged unit can be mounted on existing machines, or it is an optional extra on new grinders. It directs a stream of cool mist right at the point of grinding contact. Resulting cooler grinding minimizes need for wheel dressing and also prevents tool "burning." System includes the unit, extension tube, jet, and dual hose. Offered by **Black Diamond Saw & Machine Works**, 131 North Ave., Natick, Mass.

For more details circle NED-422 F8 on enclosed inquiry slip

for PRECISE & ACCURATE ANGULAR POSITIONING IN INSPECTION & PRODUCTION

OMT OPTICAL DIVIDING HEADS



This new OPTICAL DIVIDING HEAD is a MUST for the critical indexing work which industry requires today. SPEED and EXTREME ACCURACY of indexing that would be impossible with mechanical type heads are outstanding features of the OMT OPTICAL DIVIDING HEAD. MODERATELY PRICED.

These PRECISION-BUILT optical dividing heads are constructed for long and trouble-free life.

SPECIFICATIONS

OPTICAL SCALE READING DIRECT TO 2 SECONDS — SWING 6 1/2" — MAX. DIST. BET. CENTERS 14 1/2" when used with Std. Base furnished.

SIZE OF HEAD: Length 7 1/2" Width 6 3/4" Height 7 1/2"

BASE PLATE DIMENSIONS 30" x 15" x 6" which is furnished as Std. Equip't.

OTHER MODELS READING DIRECTLY TO 1 MIN. AVAILABLE

Send for Illustrated Folder — Code GIUNS

GEORGE SCHERR CO., Inc.
COMPLETE LINE OF PRECISION INSTRUMENTS
200 ND LAFAYETTE STREET • NEW YORK 12, N.Y.

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Engrave them ALL yourself on the portable Engravograph

It's tracer-guided for unskilled labor. Every plant needs one. From $290 up.

Write on your business letterhead for our 28-page, fully illustrated catalog No. NM-1.

new hermes ENGRAVING MACHINE CORP.
13-19 UNIVERSITY PLACE, NEW YORK 3, N. Y.

For more details circle NED-424 F8 on enclosed inquiry slip

Hobbs HOUR METERS for

MEASUREMENT OF USE

PROTECTIVE MAINTENANCE

Operating Time of Production and Service Equipment — AT A GLANCE!

To obtain maximum use of production and service equipment, it is essential to know the hours of operation. This information permits accurate study of utilization, also provides data needed for protective maintenance which improves performance and lengthens service through regular attention at the right time.

Hobbs Hour Meters indicate to the HOUR and MINUTE the time of equipment operation. Not a revolution counter, but a true timing instrument. ALTERNATING CURRENT meters time the operation of any equipment powered by a-c electricity; DIRECT CURRENT meters, the operation of any equipment powered by internal combustion engine or battery.

● Distributors in Principal Cities
WRITE FOR CATALOG 600

JOHN W. Hobbs CORPORATION A DIVISION OF STEWART SW WARNER
2055 YALE BLVD. SPRINGFIELD, ILLINOIS

For more details circle NED-425 F8 on enclosed inquiry slip

RUBBER

developed and shaped to fit your specifications

MOLDED RUBBER
When you need small molded rubber parts—see Faultless. Complete facilities for mass production of bulb goods, stopples, other quality molded parts.

SPONGE RUBBER
Your best source for sponge rubber. Available in a wide choice of thicknesses and densities.

COLOR SPECIALISTS
Color is increasingly important in industrial manufacturing. As color specialists we can match almost any shade desired.

LABORATORY FACILITIES
Let us compound your rubber parts to meet your requirements. Complete laboratory facilities, expert chemists.

For Full Details Write Dept. I. The Faultless Rubber Company, Ashland, Ohio

FAULTLESS

For more details circle NED-426 F8 on enclosed inquiry slip

NOW! SOLVE THAT LOW DOCK PROBLEM

NEW Economically

HI-LO AUTOMATIC DOCKBOARD

Model 1208; 8' long by 6' wide. Model 1210; 10' long by 6' wide.

SAVES TIME Backing truck automatically adjusts long, wide ramp surface . . . speeds loading. Does away with labor-wasting placement and storage of loose plates.

SAVES EXPENSE The HI-LO is simply lagged to top of present dock. Can't be lost, stolen, or damaged. Simple counterbalance system. No hydraulics, motors, or controls.

IMPROVES SAFETY No more loose plate hazards. No lifting or straining. The HI-LO is a permanent part of the dock . . . cannot slip out of position.

HI-LO Automatic DOCKBOARDS

WRITE FOR COMPLETE LITERATURE

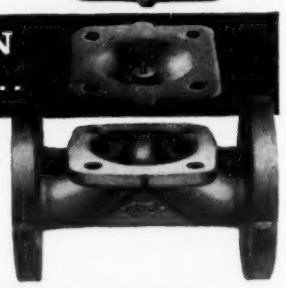
KELLEY COMPANY, INC.
2125-A W. Mill Road
Milwaukee 9, Wisconsin

▲ For more details circle NED-427 F8 on enclosed inquiry slip ▲

Outperforms other valves under SEVERE chemical conditions

GRINNELL-SAUNDERS DIAPHRAGM VALVES

with TEFLON Diaphragms...



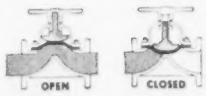
Grinnell Teflon Diaphragms are made by a special process which produces a better product of greater density, toughness and flex life.

The case histories cited below demonstrate that Teflon offers a very high degree of chemical inertness to some of the most difficult chemicals which industry today must handle. Yet these are only a few of many success stories in the Grinnell files.

Diaphragm life depends on temperature, pressure and frequency of operation. Inquiries must include complete service data to receive prompt attention.

Service Conditions	Saunders Valve Now Used	Service Life: Teflon Diaphragm	Service Life: Previous Valve
Case 1. Benzene hexachloride (30%-40% benzene, free chlorine); 120 to 130 F, 10 to 20 psi; operated 3 to 4 times daily	Glass lined bodies; Teflon Diaphragm; 1 to 3 inches	10 to 14 months	1 to 2 months
Case 2. 90%-95% HNO_3 plus 1.8% HF (specific gravity 1.62-1.77) 115 F in summer; 40 F in winter; 125 psi; operated 2 to 3 times daily	Durimet 20 body; Teflon Diaphragm; 1 to 3 inches	8 months	2 months
Case 3. Sulphuric acid 85%; outside temperature; no pressure; operated 4 times daily	Iron Bodies; Teflon Diaphragms; 2½ inches	Still in service after 1 year	3 weeks

Features of Grinnell-Saunders Diaphragm Valves:



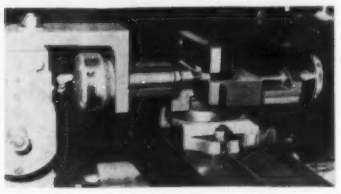
- Diaphragm lifts high for streamline flow in either direction . . . absolutely isolates working parts from fluid.
- Resilient diaphragm assures positive closure.
- Body, lining and other diaphragm materials to suit service conditions.
- Simple maintenance. Diaphragm can be replaced easily without removing valve.

GRINNELL
WHENEVER PIPING IS INVOLVED

Grinnell Company, Inc. Executive Offices: Providence, R. I.
Sales Offices and Warehouses in Principal Cities

▲ For more details circle NED-428 F8 on enclosed inquiry slip ▲

AIR TURBINE GRINDER
available with left-hand rotation



Applications for the DIA-LH left-hand rotation air turbine grinder include slot and depth grinding, tool chip breaker grinding, and cutter sharpening. Mounted on milling machines or machine grinders, its left hand rotation matches machine grinder spindle rotation, permitting use of any standard dust collection set-up. Grinder operates at 50,000 rpm on only 8 cfm of air. Its 1¼ hp is ample for up to ½-in. diameter grinding wheels. Prelubricated, grease-shielded ball bearings are preloaded to control end play. Made by **Onsrud Machine Works, Inc.**, Portable Tool Div., 7766 Lehigh Ave., Niles 31, Ill.

▲ For more details circle NED-429 F8 on enclosed inquiry slip ▲

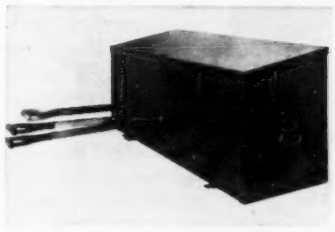
TAP EXTENSIONS
for hard-to-get-at holes over ½ in.

Standard length of 12 in. and special lengths up to 30 in. are available in Series 700-D, 700-E, and 700-F tap extensions for tapping hard-to-get-at holes

with taps larger than ½ in. Collet grip permits dull or broken taps to be changed by hand. Taps are removed or inserted by loosening or tightening the collet cap with thumb and finger. Two or more extensions can be joined as required by either machine or hand tapping operations. Made by **Ritmar Corp.**, Dept. NED-81, 183 New York Ave., Huntington, N. Y.

▲ For more details circle NED-430 F8 on enclosed inquiry slip ▲

TOOL CHESTS
hold handle tools, other equipment



Elmer welded steel tool chests hold six "handle" tools such as shovels and picks in a slot (optional), plus clothing, extra stock, and equipment. Largest size is 48 x 36 x 24 in., weighs 160 lb, and has two removable trays (optional). The Little Elmer chest is 48 x 16 x 24 in., weighs 80 lb, and can be equipped with an optional removable tray. Extra feature of both models is an angle iron stilt mounting. A sloping top offers weather protection. They have welded lifting handles, overlapping flanged top, welded padlock hasp, and gray or light green finishes. Made by **Scott-Rice Co.**, Dept. A, 610 S. Main St., Tulsa, Okla.

▲ For more details circle NED-431 F8 on enclosed inquiry slip ▲

NEW BULK PACKING FOR SOUTHERN SCREWS ..designed for you!

Here's how Southern's NEW BULK PACKAGE can save your operation handling time, production time, storage space and paperwork.

EASIER TO STORE • EASIER TO OPEN and CLOSE • EASIER TO USE • EASIER TO IDENTIFY • HEAVY DUTY CORRUGATED CARTONS • DISPOSABLE PALLETS AT NO EXTRA COST!

Based on the new pallet and carton system, standard packing quantities for each item have been established. For complete information, write for chart BP-1, to Southern Screw Company, P. O. Box 1360, Statesville, N. C.

Wood Screws • Stove Bolts • Machine Screws & Nuts • Tapping Screws Wood Drive Screws

DESIGNED FOR MODERN MATERIALS MOVEMENT, FITS ALL PRODUCTION LINES, LARGE OR SMALL!

Southern Screw's new bulk packing answers your long-time need for a conveniently sized industrial package that can be handled easily by one man without the use of power equipment.

At the same time Southern's new bulk package is ideal for mechanized mass handling or storage with or without palletizing.

Southern SCREW COMPANY

WAREHOUSES: NEW YORK, CHICAGO, DALLAS, LOS ANGELES

▲ For more details circle NED-432 F8 on enclosed inquiry slip ▲

Soapy water, detergents, bones, grit and lint combine to make appliances a hard-to-handle sealing problem. Add very limited space factor, and you've got a real set of conditions on your hands. That's why...as one design engineer to another... we urge you to let us work with you. Tell us about your requirements or request illustrated Bulletin S-204-3. Crane Packing Company, 6411 Oakton St., Morton Grove, Illinois, (Chicago Suburb).

John Crane MECHANICAL PACKINGS · SHAFT SEALS · TEFLON PRODUCTS · LAPPING MACHINES · THREAD COMPOUNDS

CRANE PACKING COMPANY

▲ For more details circle NED-433 F8 on enclosed inquiry slip ▲

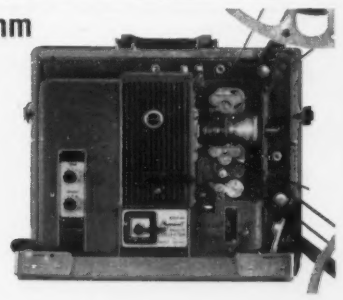
NEW! BOKUMATIC RECESS TOOL HOLDER

A new standard automatic recessing tool holder has been introduced by Bokum Tool Company. Designed to accommodate Bokum standard "O" ring, retaining ring, back chamfering and thread relief cutting tools, the tool holder features a double cam action for chatter-free, precision operation. It can be used on standard drill presses, radial drills, turret lathes and chucking machines. Write for complete information.

BOKUM TOOL COMPANY, INC.
14775 WILDEMERE AVENUE
DETROIT 38, MICHIGAN

▲ For more details circle NED-434 F8 on enclosed inquiry slip ▲

SHOW YOUR 16mm SOUND MOVIES on this LOW-COST PROJECTOR



Now, for little more than the cost of a good *silent* projector you can get the new, low-cost Kodak Pageant *Sound* Projector, Model AV-085. Lists for only $439.00.*

Powerful 8-watt amplifier is designed around modern printed circuits that make it more compact, rugged, easy to service. 11-inch oval speaker is housed in a baffled enclosure for good response over the entire frequency range.

Super-40 Shutter and 750- or 1000-watt lamp capacity provide extra screen brilliance. Model AV-085 has new Pageant tungsten carbide pulldown tooth that's virtually wearproof. New 3-wire power cord meets all municipal electrical codes, adapts for ungrounded outlets, too.

You *never* oil this new Pageant (or any other Pageant)! It's lubricated for life at the factory. Setups are fast, easy. Reel arms fold down with belts attached, ready to run. Film path is printed on machine, simple to follow.

FREE BOOKLET, Bulletin V3-22, gives full details. Write for it.

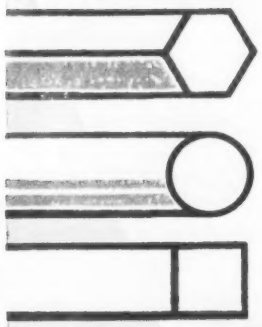
**List price, subject to change without notice.*

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak

▲ For more details circle NED-435 F8 on enclosed inquiry slip ▲

MUELLER BRASS CO.
S-C (super-cutting) ROD
NEVER VARIES!



Perfectly uniform from batch to batch . . . its high quality never varies from order to order. Has excellent machinability for higher production at lower cost. If you use rod, you'll be money ahead using S-C . . . why not place your order today.

If you want more facts write for Engineering Manual FM-3010

251

MUELLER BRASS CO. PORT HURON 37, MICHIGAN

For more details circle NED-436 F8 on enclosed inquiry slip

Washette by Cook
AIDS AMERICAN INDUSTRY

Washette has proved its usefulness in factories, plants, mine and construction camps . . . *anywhere* laundry must be done quickly, efficiently, economically. Superb engineering, stainless steel construction, automatic controls . . . Washette gives *life-time* of trouble-free service.

Washette is America's finest open-end washer, *and the lowest priced!*

Washette by Cook is authorized to display the Canadian Seal of Approval.

Why Washette is America's Leading Open-End Washer
- Especially trained operators unnecessary
- Both AC and DC models available
- Fully Automatic Controls
- Parts Standard, available anywhere

FOR LITERATURE, PRICES AND DISTRIBUTORS, CONTACT
COOK MACHINERY CO., INC.
4301-T SOUTH FITZHUGH AVE. DALLAS 10, TEXAS

For more details circle NED-437 F8 on enclosed inquiry slip

RMC Dial Thermometers will serve you best!

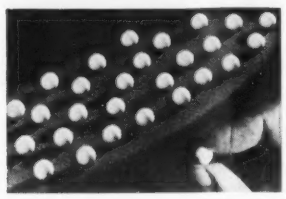
HERE'S WHY:

1. Only RMC does a genuine hermetic sealing job to prevent bimetal freeze-up and dial fogging.
2. Only RMC offers an external dial-reset device to permit on-the-job recalibration when necessary.
3. The bi-metallic helix is silicone dampened to withstand shock and vibration; with special dampening bearings.
4. #304 Stainless Steel and heliarc welding provide superior resistance to corrosion.
5. RMC can give you the right thermometer for the job. Many different types are available, with dial sizes ranging from 1" to 5" Scale ranges from −150°F to +1000°F.

RMC
REPRESENTATIVES IN ALL PRINCIPAL CITIES
ROCHESTER MANUFACTURING CO.
114 ROCKWOOD STREET — ROCHESTER 10, N.Y.

For more details circle NED-438 F8 on enclosed inquiry slip

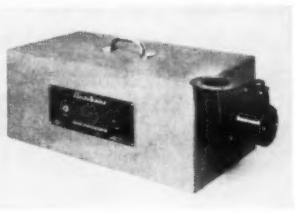
HARD GLASS BALLS
have low coefficient of expansion



Nonporous Pyroceram balls, available in a range of sizes, resist corrosion by acid solutions that attack steel, aluminum, and copper. The hard, high tensile strength balls, made from the Corning Glass Works material, remain hard at a temperature of 2200° F, and have a low coefficient of expansion. They take a high lapped finish, have excellent electrical properties, even at high temperatures, and are as light as aluminum. Made by **Hartford Steel Ball Co.**, 9 Jefferson Ave., West Hartford 6, Conn.

For more details circle NED-439 F8 on enclosed inquiry slip

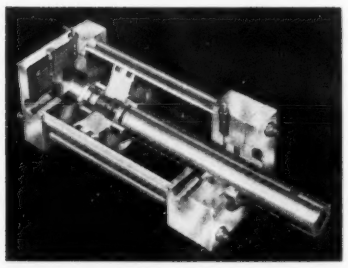
ELECTRONIC DEODORIZOR
destroys objectionable odors



Employee morale can be boosted by this electronic unit which removes objectionable odors from the air in commercial and industrial plants. It operates on 110 v and can be placed at the source of the odor, or inserted into air conditioning system. Unit uses no chemicals, nor does it add cover-up odors. It actually renders smells odorless. Units can be rented with option to buy. Made by **American Electroaire Co.**, Dept. NED, 260 Tremont St., Boston 16, Mass.

For more details circle NED-440 F8 on enclosed inquiry slip

AIR & OIL CYLINDERS
23 models, each in 10 diameters



Recommended for maximum air pressure of 150 psi and maximum oil pressure of 500 psi, the Squaremaster line of cylinders consists of 23 different models, each in 10 bore diameters. Each model has a safety factor of five. Made of honed brass tubing, the cylinders have bronze floating-cushion bushings, built-in check valves for instantaneous reversal, and replaceable cartridge type piston rod bearings. Standard mountings offered are extended tie rod, angle foot, lug foot, trunnion, blind end flange, rod end flange, and clevis. Double end rods, internally and externally threaded, are available on most models. Cushioning, available in all cylinders, is varied by adjusting screws. Made by **Rivett, Inc.**, Dept. NEP-2, Brighton 35, Boston, Mass.

For more details circle NED-441 F8 on enclosed inquiry slip

HEAT BOUNCES BACK OFF ROOFS

protected by Tropical's
COOLERANT!

Bright, non-staining Coolerant, easily brushed or rolled on commercial or industrial roofs, deflects up to 70% of the sun's radiant heat. It reduces below-roof heat up to 26°—you can feel the difference AT ONCE! Reduces air-conditioning load. Prevents summer dry-out, adds years to roof life. Increases winter heating efficiency. Anyone can apply it.

75th ANNIVERSARY 1883 · 1958

FREE! Complete details sent at once. Beat the heat this summer with Coolerant. Write now!

TROPICAL PAINT COMPANY
1124-1264 W. 70th, Cleveland 2, Ohio
HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883 • SUBSIDIARY OF PARKER RUST PROOF COMPANY

For more details circle NED-442 F8 on enclosed inquiry slip

TOKHEIM High-Vacuum
HAND PUMPS
for industrial liquids

Here's an all 'round utility pump that saves much more than its cost in speeding production, improving housekeeping, preventing waste. Eliminates slippery floors and liquid accumulation so often the cause of fire and accidents. Delivers 20 gallons per 100 back and forth strokes. Pumps oil and many other liquids. (Write for approved list.) Has hose or spout outlet. Call your dealer, your Tokheim representative, or write factory.

General Products Division
TOKHEIM CORPORATION
DESIGNERS AND BUILDERS OF SUPERIOR EQUIPMENT SINCE 1901
1656 Wabash Ave. Fort Wayne 1, Ind.
Subsidiaries: Tokheim N.V., Leiden, Holland — GenPro, Inc., Shelbyville, Ind.
Factory Branch: 475 Ninth Street, San Francisco 3, California
In Canada: Tokheim-Reeder of Canada, Ltd., 205 Yonge St., Toronto, Ont.

For more details circle NED-443 F8 on enclosed inquiry slip

LOOKING FOR LUBRICATION SPECIALTIES?

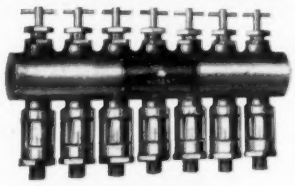


Fig. 1503F Multiple Pressure Oilers are available with from 2 to 24 feeds.

Fig. 1366E Sight Flow Fittings for indicating flow of liquid in a pipe line. Available in brass, cast iron, steel or stainless steel.

NUGENT offers a full line

Producing quality products to solve tough lubrication problems has been our business for over 60 years. We would welcome the opportunity to assist you with your problems. A phone call or letter stating your requirements will start the ball rolling.

ESTABLISHED 1897
WM. W. NUGENT & CO., INC.
3402 CLEVELAND STREET • SKOKIE, ILLINOIS

REPRESENTATIVES IN PRINCIPAL CITIES

OIL FILTERS • STRAINERS • TELESCOPIC OILERS
OILING AND FILTERING SYSTEMS • OILING DEVICES
SIGHT FEED VALVES • FLOW INDICATORS

For more details circle NED-444 F8 on enclosed inquiry slip

Safe-Tread

all the way with USS Multigrip

Smooth-edged, flat-topped risers mean that every square inch of Multigrip Floor Plate will give sure-grip traction and comfortable footing. These tough steel plates won't chip, crack or splinter—and they last for years with hardly a sign of wear. Cleaning? Simple—a hose or broom does a thorough job. You can bend or form Multigrip whenever necessary, and it's available in large plates, eliminating installation waste. Protect your ramps, floors, aisles, steps and platforms by "safe treading" with USS Multigrip Floor Plate. United States Steel, 525 William Penn Place, Pittsburgh 30, Pa.

USS and Multigrip are registered trademarks.

Sold by leading distributors from coast to coast

USS United States Steel

For more details circle NED-445 F8 on enclosed inquiry slip

NEW . . . three-way Skinner Valve line for medium-size cylinders

The A Series

This new A Series valve line bridges the gap between the famous V5 line used with small cylinders and the reliable M3 line used with large cylinders. The design of this new line permits economical and efficient operation of medium-size cylinders as well as faster operation of smaller cylinders where increased cycling speed is a necessity.

The first of the A Series line is a 3-way normally closed valve with a 5/32" orifice and 1/4" NPT ports, and a pressure rating of 125 PSI. It is designed for use with such media as oil, air and inert gases.

Despite the increase in capacity, this new direct-acting, bubbletight valve is light in weight (only 3 pounds) and compact (3 7/8" high and 2 5/8" square).

For additional information, options and specifications, call the Skinner Representative or Distributor nearest you – he's listed in the Yellow Pages. Or write us at the address below, Dept. 436.

SKINNER ELECTRIC VALVE DIVISION NEW BRITAIN CONNECTICUT 105 EDGEWOOD AVENUE

THE CREST OF QUALITY

▲ For more details circle **NED-446 F8** on enclosed inquiry slip ▲

MOTO-TRUC "Walkie" Fork Trucks

provide low cost pallet handling

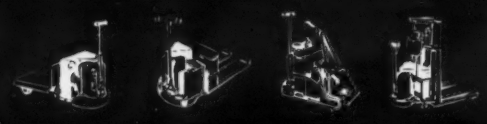
Whenever you are faced with a pallet handling job that demands a tough, dependable fork truck, consider a low-cost MOTO-TRUC "walkie" model. Not only are MOTO-TRUC "walkie" fork trucks the lowest priced of any comparable models, but their *rugged simplicity* assures lower maintenance and operating costs.

Rugged construction and simple design are typical of MOTO-TRUC fork trucks. The compact, readily accessible drive unit, foolproof travel and lift controls, automotive type wheel brake, smooth-acting lift and tilt controls and rigid upright assembly, all serve to assure safe, dependable pallet handling with a minimum of downtime for repairs.

Available In Both "Walkie" And Small Rider Models

MOTO-TRUC provides a wide choice of compact fork trucks in both operator walk and operator ride styles. All are provided with telescoping uprights and hydraulic tilt fore and aft. Capacities range from 1,500 to 3,000 lbs. with right angle stacking aisles as low as 91". Lifts ranging up to 120" are standard and higher lifting heights can be provided. A complete line of special attachments including clamps, rams, booms and similar load handling devices are available.

Ask for: Catalog 56W on walkie trucks; Catalog 56R on Ride-A-Man models



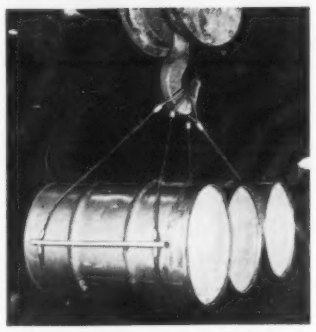
For rugged, low cost pallet handling specify MOTO-TRUC fork trucks.

The MOTO-TRUC Co.

1961 EAST 59th ST. • CLEVELAND 3, OHIO

▲ For more details circle **NED-447 F8** on enclosed inquiry slip ▲

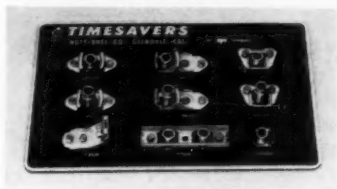
DRUM SLING
lifts three drums without shifting



Three drums handled at one time by this drum sling are held securely with no possibility of their shifting or falling out. Load is evenly distributed, with drums held tightly together by their own weight. Spreaders hold wire rope in position as it passes around the load. Hand-spliced loops with tapered swaged fittings reduce time required to hitch and unhitch each load. Sling ends slip under drums, back to hook. Price is $30. Made by **Lowery Brothers, Inc.**, Dept. NDC, 9332 S. Anthony Ave., Chicago 17, Ill.

▲ For more details circle **NED-448 F8** on enclosed inquiry slip ▲

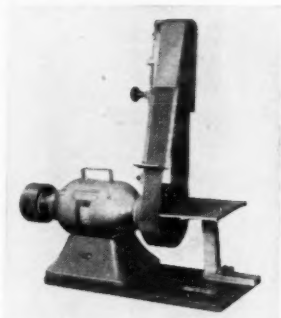
ANCHOR NUTS
sample self-locking units offered



Samples of nine types of self-locking anchor nuts are now available mounted on a plate. They will be sent on receipt of letterhead request with a simple removal tool and descriptive literature. Nuts feature an interchangeable threaded element which can be replaced in 5 sec. Offered by **Nutt-Shel Co.**, Dept. NED, 811 Airway, Glendale 1, Calif.

▲ For more details circle **NED-449 F8** on enclosed inquiry slip ▲

ABRASIVE BELT MACHINE
for grinding, finishing, deburring

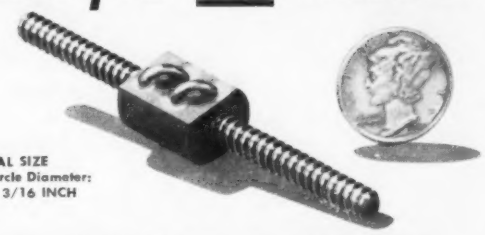


Fast cutting abrasive belt and a serrated contact wheel are incorporated in the Versa-Mite bench-type abrasive machine. A coated abrasive disc, fastened to one side of the contact wheel, and a tilting adjustable table permit square and angle grinding plus chamfering and surfacing. Abrasive belt extension arms can be mounted on one or both ends of the motor. Flat surfacing is done on the plate mounted on the extension arm. Machine can be mounted with the arm in horizontal or vertical positions. Grinding wheels, wire brushes, or buffing wheels can be mounted on either end of the motor. Made by **Carborundum Co.**, Curtis Machine Div., 1302 E. Second St., Jamestown, N. Y.

▲ For more details circle **NED-450 F8** on enclosed inquiry slip ▲

▲ For more details circle **NED-451 F8** on enclosed inquiry slip ▲

Here's your new ANSWER



ACTUAL SIZE
Ball Circle Diameter:
ONLY 3/16 INCH

WORLD'S SMALLEST ball/bearing SCREW SOLVES CRITICAL MINIATURE POSITIONING/CONTROL PROBLEMS

An unprecedented achievement in minimum size and weight, maximum efficiency and service life for ultra-precise controls. *It's another first from Saginaw*—and the possibilities it opens up for improved electrical and electronic controls are limited only by your imagination! • *The Saginaw b/b Screw is so compact and light*, you can save substantially on space and weight. • *It's so efficient*, (over 90%) you can use much smaller motors and gear boxes. • *It's so precise*, you can position components within .0005 inch per inch of travel. • *It's so dependable*, you can rely on long life even in adverse environments. • Phone or write today for 1958 Engineering Data Book, or see our section in Sweet's Product Design File.

Saginaw b/b Screws

SAGINAW STEERING GEAR DIVISION OF GENERAL MOTORS • SAGINAW, MICH.

▲ For more details circle **NED-452 F8** on enclosed inquiry slip ▲

A simple, direct reading on the Alnor Velometer gives you an instant measure of air flow speed through grilles, ducts, furnaces, spray booths, or in the open.

Precision-built and self-contained, this portable instrument brings laboratory standards to the line or field installation. Available in a wide variety of scale ranges, full assortment of jets and fittings. You'll want all the facts (no safety department should be without a Velometer). Get Bulletin 2448-G. Attach this ad to your letterhead and mail to: Illinois Testing Laboratories, Inc., Room 529, 420 No. LaSalle St., Chicago 10, Illinois.

PRECISION INSTRUMENTS FOR EVERY INDUSTRY — Alnor

▲ For more details circle **NED-453 F8** on enclosed inquiry slip ▲

BUILD ANY RACK WITH ORDINARY PIPE and TUBE-STRUT the universal clamp AT 1/2 THE USUAL COST

Free RACK MATERIALS CALCULATOR to show you at a glance the materials required for any storage rack installation.

TUBE-STRUT CORP.
2960 Marsh Street,
Los Angeles 39, Calif.
NED-C2

Please send Tube-Strut Calculator to
NAME _____
FIRM _____
ADDRESS _____
CITY _____ STATE _____

▲ For more details circle **NED-454 F8** on enclosed inquiry slip ▲

POWER WRENCHES SOCK HARD...

Snap-on sockets come back for more!

Just ask a *Snap-on* sales engineer about companies that have cut socket breakage by switching to *Snap-on*.

These heavy-duty industrial sockets have the extra heft, accurate dimension, and special-steel toughness to take impact pounding.

Result: more work hours per socket — far less downtime due to frequent breakage of ordinary sockets.

Talk sockets with your *Snap-on* man. He can offer competent advice on what's best for you in the wide *Snap-on* range of industrial sockets. You'll get fast action from a nearby *Snap-on* branch on regular or emergency needs.

SNAP-ON TOOLS CORPORATION

8110-F 28th Avenue • Kenosha, Wisconsin

For more details circle NED-455 F8 on enclosed inquiry slip

Square D Vertical Action Starters Sizes 0, 1, 2, 3, 4, and 5

ONLY SQUARE D GIVES YOU ALL 5

1. QUICK INSTALLATION!
2. TOP PERFORMANCE!
3. REAL OVERLOAD PROTECTION!
4. EASY INSPECTION and MAINTENANCE!
5. WIDE-RANGE ADAPTABILITY!

Write for Bulletin SM 275 to Square D Company, 4041 North Richards Street, Milwaukee 12, Wisconsin

NOW ... EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE

SQUARE D COMPANY

For more details circle NED-456 F8 on enclosed inquiry slip

NEW... "Lift of 1001 Uses"

Weld-Bilt HY-BOY VERTI-LIFT

Does More Work FASTER...CHEAPER

LIFTS • STACKS • LOADS • UNLOADS
HANDLES Cartons, Pallets, Drums
Capacity, 1500 lbs. • Lifts, 64" to 112"

Prove this yourself . . . New HY-BOY Electro-Hydraulic Verti-lifts "just fit" *more* handling, lifting, stacking jobs in your plant than any other unit! And at lower investment! Modern push-button control, "Unitized" power unit, built-in charger, indicator light and ammeter, self-aligning floor locks, and other features — plus a wide choice of models and accessories—make HY-BOY your best investment by any comparison. Buy one ... buy several ... and prove it!

Get your copy of new HY-BOY Portable Verti-lift Catalog featuring the "Lift of 1001 Uses."

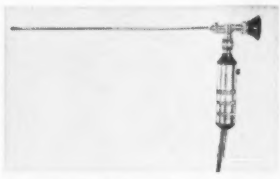
Materials Handling Engineers since 1932

WEST BEND EQUIPMENT CORP.

311 River Road, West Bend, Wis.

For more details circle NED-457 F8 on enclosed inquiry slip

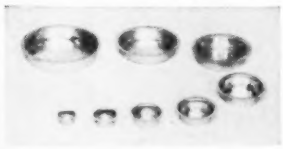
HOLE INSPECTION TELESCOPE
looks into cavities, around corners



Inspection of cavities in machinery, dies, and other products is facilitated by this 5X hole inspection telescope. A lens bulb beams light into hole too small to insert light probe. Available for side viewing holes from 0.125 in. up is a 1/8-in. diameter mirror. Side viewing adapters are available with diameters of 0.123 to 0.500 in. Another inspection device, available for viewing almost all areas of a cavity, has 47 tiny lenses inside a flexible tube and a control wheel that moves the end of the tube around corners. Made by **Eder Instrument Co.**, Dept. 137, 2293 Clybourn Ave., Chicago 14, Ill.

For more details circle NED-458 F8 on enclosed inquiry slip

ALUMINUM HOLE PLUGS
in 1/8 to 3-in. pipe sizes



Internal threads of pipes can be protected in transit or processing by these soft aluminum plug-protectors made in pipe size increments from 1/8 to 3 in. Other applications include protection of bared ground, polished, plated, or painted internal surfaces; temporary sealing of valve seats, tubes, and tube fittings; sealing-in oil, grease, and rustproofing compounds for shipping; and masking surfaces during plating, coating, anodizing, painting, and other finishing operations. Made by **Protector Products, Inc.**, Dept. NED, 2156 W. 15th St., Cleveland 13, Ohio.

For more details circle NED-459 F8 on enclosed inquiry slip

ELECTRONIC DIGITAL VOLTMETER
measures 0.001 to 1000 v dc

Direct current voltages from 0.001 to 1000 are measured with 0.1 per cent accuracy by Model 801 portable electronic digital voltmeter. Voltage reading is presented on a clear, in-line digital readout in less than 1/10 sec. A complete three-digit conversion is made in 70 milliseconds. Display time is adjustable from 1/10 sec to infinity. On infinity setting a pushbutton "read once" control gives a new reading. Input impedance of Model 801 is 20,000 ohms per volt. It is priced at $960.00. Made by **Cohu Electronics, Inc.**, Kin Tel Div., 5725 Kearny Villa Rd., San Diego 11, Calif.

For more details circle NED-460 F8 on enclosed inquiry slip

CIGARS-CIGARETTES-MATCHES
immediately extinguished ...with
SIPCO DUNKING STATIONS

Fire Hazards from Smoking are a problem EVERYWHERE.

STOP FIRES BEFORE THEY START—with SIPCO DUNKING STATIONS.

Heavy duty CAST ALUMINUM canisters—guaranteed 3 years against breakage. Partly filled with water, they drown the "smoke". NO FIRE HAZARDS — NO ODORS — NO UNSANITARY CONDITION.

Lift off the canister, flip back the lid, dump it and the cleaning job is done.

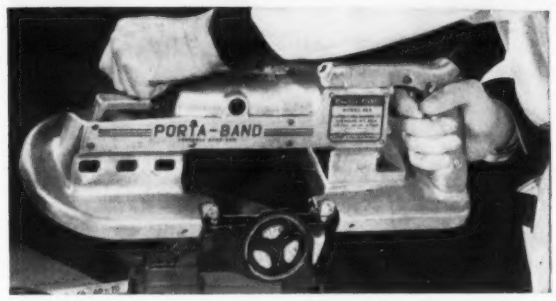
Available in over a dozen different STANDARD and JUMBO SIZE models. Choice of black crinkle or bright polished DELUXE finishes to suit your particular requirements. NEAT, ATTRACTIVE — USED EVERYWHERE — OFFICES, CLUBS, LOUNGES, HOSPITALS, HOTELS, SHOPS, RESTAURANTS, INSTITUTIONS, SCHOOLS, ETC.

NEW MODEL 4J
Designed for permanent mounting on walls, posts, columns, etc. in public areas. Eliminates pilfering problem. JUMBO size canister furnished with light weight, rugged glass-fiber inner-liner. Flip back the lid—lift out the inner-liner and dump it. Inner-liner fits all JUMBO size SIPCO canisters and is available separately.

MODEL 1JD
JUMBO size DELUXE FLOOR MODEL. Heavy weighted base and attractive, eye catching sign. Height 42"—weight 26 lbs. Ideal for halls, aisles, landings, etc. Also available less sign (MODEL 1JWS). WRITE FOR ILLUSTRATED BROCHURE.

STANDARD INDUSTRIAL PRODUCTS CO.
DEPT. D • 920 N. GARFIELD AVE. • PEORIA, ILLINOIS

For more details circle NED-461 F8 on enclosed inquiry slip



Now—cut metal 15 times faster than hand hack sawing!

Slice through 1½" cold-rolled steel in 41 seconds—through 3½" lead-sheathed copper cable in 90 seconds! This new *Portable* Band Saw is *fast—two and a half times faster* than bulky power hack saws!

It's light, compact—handles easily, goes anywhere there's a job to be done. *Continuous cutting action* delivers smooth, controlled sawing in any position, even in cramped quarters—on ferrous and non-ferrous metals, "problem" materials.

Saves its cost over and over—send now for complete specifications and performance data.

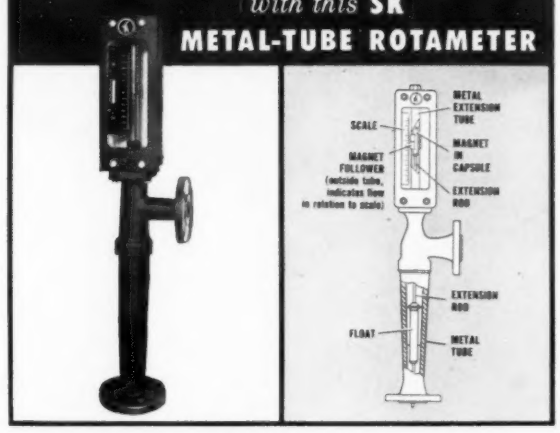
MODEL 524 PORTA-BAND — ONLY $225
WRITE TODAY FOR FULL INFORMATION

PORTER-CABLE Machine Company
8126 Marcellus St.
Syracuse 4, New York

Porter-Cable *Quality Power Tools*

For more details circle NED-462 F8 on enclosed inquiry slip

Measure Rate-of-Flow of
HARD-TO-HANDLE FLUIDS
with this **SK METAL-TUBE ROTAMETER**



SK Metal-Tube (Armored) Rotameters are designed for measuring the rate-of-flow of hazardous fluids, high pressure fluids, and steam. Their accuracy, sound design, and sturdy construction make these instruments easy to apply and easy to use in direct and remote indicating, recording and controlling installations.

For additional data, write to SK for Bulletin M-1, or detail your problem.

Schutte and Koerting COMPANY
INSTRUMENT DIVISION
2227 STATE ROAD, CORNWELLS HEIGHTS, BUCKS COUNTY, PA.

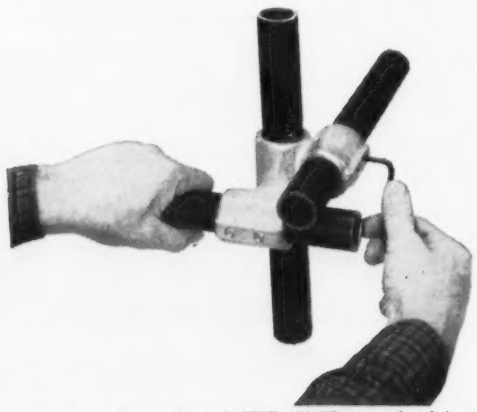
For more details circle NED-463 F8 on enclosed inquiry slip

You can
BUILD
CHANGE
EXPAND
MOVE
your storage racks
with only a
HEX KEY,
HACKSAW
and
RACKMASTER® FITTINGS

RACKMASTER FITTINGS cut rack-building time as much as 60% by eliminating threading and welding. They cut other rack-building costs, too—
- pipe is 100% salvageable
- pipe-cutting is reduced to a minimum
- regular warehouse crews can build racks
- slip-on feature simplifies design and construction

RACKMASTER is stocked by leading distributors. Write for Rackmaster Bulletin #24 and details on multi-purpose NU-RAIL FITTINGS.

THE HOLLAENDER MANUFACTURING CO., 3841 Spring Grove Ave., CINCINNATI 23, OHIO



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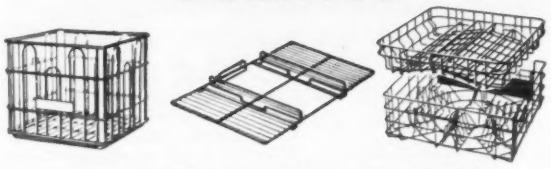
FOR **ECONOMY** and **DURABILITY...**

Formed Wire Products by Peerless



Now, more than ever, *Economy* of production is important. For this reason alone you'll be wise to investigate Peerless' service on formed wire product design and fabrication.

The *Durability* of Peerless' formed wire products too, speaks of quality through and through.

Write today! Your drawings and specifications will bring cost saving quotations by return mail.

PEERLESS WIRE GOODS COMPANY, INC.
2706 FERRY STREET · LAFAYETTE, INDIANA

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1200 ¾" TUBE ENDS PER HR.

Deburred AND Faced

ON **PINES** END-FINISHING MACHINE

At Tube Processing, Inc., Indianapolis, the Pines No. 600 End-Finishing Machine, illustrated at right, is today performing combination facing and inside and outside deburring operations on 3/4"x.035" x 15" steel tubes at average net production rates of 1200 tube ends per hour. On smaller jobs, 1/4" and 3/16" steel tubes, net production averages up to 2000 ends per hour. The machine is equipped with air-operated clamp and foot pedal control.

Fast, Accurate Work

These outstanding performance records are typical of fast, accurate results achieved in other plants on all kinds of deburring, facing, chamfering, pointing, and reaming operations. This is because the machine is designed to clamp and feed work to the rotating cutters in one pass. This enables the operator to work more efficiently with less fatigue. Small and compact, the Pines No. 600 handles stock diameters up to 2". Maximum feed stroke is 1-1/4". Larger models for stock sizes up to 5" are also available.

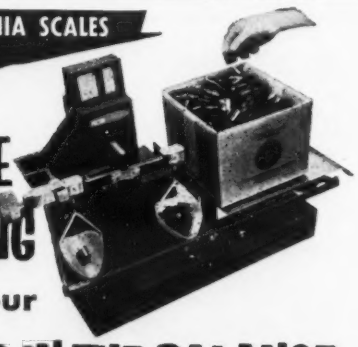
PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery · 641 WALNUT · AURORA, ILLINOIS
PRODUCTION BENDING · DEBURRING · CHAMFERING MACHINERY

FREE BULLETIN
Write for facts on how these machines cut production costs.

▲ For more details circle **NED-466 F8** on enclosed inquiry slip ▲

PENNSYLVANIA SCALES

FAST... ACCURATE COUNTING when your PROFIT IS IN THE BALANCE



Pennsylvania Counting Scales protect your profits in two ways . . . by speeding production counting and weighing . . . and by precision accuracy that eliminates profit-stealing waste and over-weights.

- Counting Scales
- Over/Under Scales
- Fan Dial Scales
- Food Scales
- Grain & Dockage Scales
- Industrial Scales
- Laboratory Scales
- Special Purpose Scales

FREE BOOKLET

Don't let hand counting or incorrect counting scales waste your money. Write for copy of "Counting Scale Cost Saving Report" . . . explains procedures and gives valuable tips.

Golden Anniversary 1908 1958 PENNSYLVANIA SCALE COMPANY BAREVILLE, PA.
PENNSYLVANIA SCALES
Pennsylvania Scale Company • Bareville, Pa.

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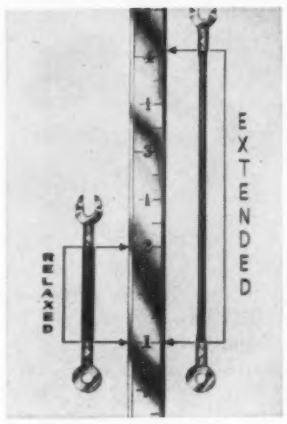
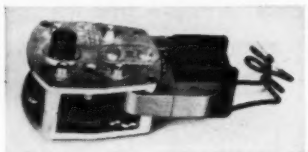
STRETCH CABLES
2 and 3-conductor types



Capable of stretching up to 200 per cent, then retracting, these stretch cables will carry up to 2 amp. Cables are made in 2 and 3-conductor types and have spade, clip, probe, or round terminations. Jackets are nylon, rubber, or neoprene. Photo shows 2-amp single-conductor cable in relaxed length of 1-in. and extended to over 3 in. Made by **Stretch Wire Corp.**, Dept. NE-28, Box 893, New Rochelle, N. Y.

▲ For more details circle **NED-468 F8** on enclosed inquiry slip ▲

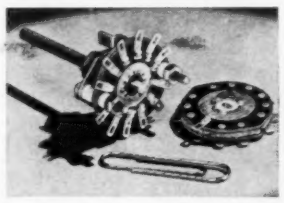
FRACTIONAL HP MOTOR
has easily coupled output shaft



Output shaft of this low cost, spur gear, fractional horsepower motor is easily coupled to an input shaft or rotating mechanism. Also available are other spur gear, worm gear, and other types of slow speed motors. Standard motors with single or dual shafts and variable shaft length, speed, and rotation are offered. Special motors can be built. Made by **Brevel Products Corp.**, Dept. NED, 601 W. 26th St., New York 1, N. Y.

▲ For more details circle **NED-469 F8** on enclosed inquiry slip ▲

SUBMINIATURE SWITCH
two and three-layer types offered



Insulation resistance in excess of 10,000 megohms is built into Series 100 subminiature phenolic switches. Constructed with a Type PBE laminated phenolic wafer of 15/16-in. diameter, they are offered in two types. Three-layer type has a 1/8-in. thick phenolic section with up to 20 insulated clips. Double-layer, 1/16-in. thick type has up to 12 clips per section. A maximum of six 1/16-in. sections or four 1/8-in. sections can be mounted on a single shaft within a 2-in. depth. Contact combinations from 1-pole, 12-position to 4-pole, 3-position can be supplied. Switches are rated at 5 amp at 6 v dc or 100 ma at 110 v ac, make and break, resistive load. Current carrying capacity is 5 amp. Made by **Globe-Union, Inc.**, Centralab Div., Dept. DCB, 900 E. Keefe Ave., Milwaukee 1, Wis.

▲ For more details circle **NED-470 F8** on enclosed inquiry slip ▲

This Rodgers Platen Press Draws

800 STEEL HOUSINGS A DAY

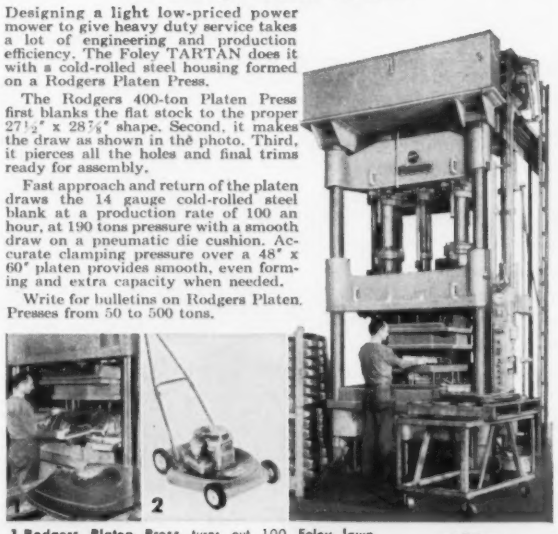
for Foley Power Mowers

Designing a light low-priced power mower to give heavy duty service takes a lot of engineering and production efficiency. The Foley TARTAN does it with a cold-rolled steel housing formed on a Rodgers Platen Press.

The Rodgers 400-ton Platen Press first blanks the flat stock to the proper 27½" x 28⅞" shape. Second, it makes the draw as shown in the photo. Third, it pierces all the holes and final trims ready for assembly.

Fast approach and return of the platen draws the 14 gauge cold-rolled steel blank at a production rate of 100 an hour, at 190 tons pressure with a smooth draw on a pneumatic die cushion. Accurate clamping pressure over a 48" x 60" platen provides smooth, even forming and extra capacity when needed.

Write for bulletins on Rodgers Platen Presses from 50 to 500 tons.



1 **Rodgers Platen Press** turns out 100 Foley lawn mower housings per hour of 14 gauge cold-rolled steel.
2 This is the Foley TARTAN, an economy 1¾ HP rotary lawn mower with a heavy duty steel housing blanked, drawn and pierced on a Rodgers 400 ton platen press.

HYDRAULICS Rodgers KEEP THE WORLD MOVING

Rodgers Hydraulic Inc.
7425 Walker St., Minneapolis 26, Minn.

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MEASURE AC and DC WITH ONE AMMETER

without electrical connections

TONG TEST is the only instrument of its type that measures both alternating and direct current. Press trigger and snap tongs around the electrical conductor for an instant reading, without shutting down equipment. Interchangeable ranges up to 1000 amperes; impossible to read the wrong scale.

Rugged and dependable, safe and accurate. No coils or wires to burn out. Thousands of TONG TEST AMMETERS in use after more than 25 years of active service. Five types available for conductors up to 3⅞" diameter, or bus bars up to 4½" x ½".

Write today for Catalog ND-400

COLUMBIA
COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave.
CLEVELAND 14, OHIO

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Hanger at N. Y. International Airport

These Concrete Floors are protected with SonNoMar for Lockheed Aircraft Service-International, Inc.

SonNoMar is a blend of newly-developed resins. Available in red, green, light gray, dark gray or transparent finish. Its attractive glossy coating resists trucking, oils, greases and most chemicals.

USE SonNoMar to dustproof concrete. It binds surface particles together and seals pores with a flexible finish highly resistant to abrasion.

USE SonNoMar for easy maintenance. Its tough, smooth, glossy surface is readily cleaned. It retains its attractive appearance.

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A Product of Sonneborn RESEARCH

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404 Fourth Ave., New York 16, N. Y.

☐ Send further information on SON NO MAR for concrete floor protection.
☐ Also send FREE 128-page Building Construction and Maintenance Handbook.

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COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE_____

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MAXIMUM ACCESSIBILITY

P·H·I PRESS
PASADENA HYDRAULICS INC.
1434 Lidcombe, El Monte, California

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KO9

...the amazing electric motor cleaner!

KO9—your Short Cut to clean electrical equipment—does an outstanding job of cleaning and degreasing motors, generators, controllers, switches, panels, instruments, meters, refrigeration lines, etc.

Cleaning motors is a cinch—all you do is immerse the running motor in KO9, remove it minutes later as clean as new!

KO13 ... YOUR SHORT CUT TO FAST, SAFE CLEANING

KO13 is a truly sensational general purpose safety solvent that will clean just about everything ... leaves surfaces smooth and sparkling clean!

KO13 quickly removes grease, oil, dirt and grime from metal, wood and paint.

Ask for Literature Today

KOR CORPORATION
56-Box 485
GARY, INDIANA

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STANDARD or SPECIAL

There's an L-S FLOOR TRUCK for Every Handling Job

Lewis-Shepard's COMPLETE line of manually operated and electric power equipment includes hundreds of floor trucks—job-tailored equipment for every conceivable handling job.

Don't be satisfied with equipment that's almost what you need ... L-S can furnish equipment that's exactly right for every application. The L-S floor truck line includes: platform types, bins, wagons and carts, dollies, dumps, shelves, racks and "specials" designed to save your handling dollars. Write for L-S Catalog No. 29-1, "Floor-master Trucks—Load-master Storage Racks."

LS LEWIS-SHEPARD®
176 Walnut Street • Watertown 72, Mass.

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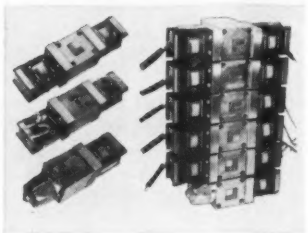
AIR & HYDRAULIC VALVES
small size units for multiple use



A compact multiple installation with a common subplate for automation control is possible with Hi-Cyclic small size air and hydraulic valves. They mount on 2-in. centers, and up to six units can be mounted on one manifold. Valves are nominal ¼-in. size, available in two, three, and four-way types with solenoid, pilot, or manual control. All spool types are offered. Photo shows top and bottom views of a double solenoid valve which measures 8½ x 2 x 2¼ in., a 7¼ x 2 x 2¼-in. single solenoid valve, and a typical six-valve installation on a 12½-in. long common subplate. Made by **Beckett-Harcum Co.**, 1147 Wayne Rd., Wilmington, Ohio.

▲ For more details circle NED-477 F8 on enclosed inquiry slip ▲

CHARGEABLE DRY CELL
has long shelf and service life

Relatively constant voltage throughout a wide temperature range is offered by this alkaline lead oxide-silver chargeable dry cell. It is made in an uncharged state, can be stored indefinitely at any temperature likely to be encountered, then charged when ready to use. Its rated capacity is delivered over a wide range of discharge rates. The cell withstands sudden drains of several milliamperes without excessive voltage drop. Nominal output is 0.9 v and average capacity is 1500 milliampere-hours. It is 1.190 in. in diameter by 0.591 in. high. Cell is available in experimental production quantities from **Mallory Battery Co.**, 3031 E. Washington St., Indianapolis 6, Ind.

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SNAP-ACTING SWITCH
miniature stub-plunger type

Life of 1 million operations is claimed for the Unimax 2HBD stub-plunger, snap-acting switch. A long bearing guide for the plunger in the one-piece switch cover assures smooth action and high repeatability. The UL - listed switch is less than 2 in. long, 11/16 in. wide, and 1 3/32 in. high overall. Electrical rating is 20 amp at 125, 250, or 480 v ac; 0.25 amp at 250 v dc; or 0.050 amp at 125 v dc. Made by **W. L. Maxson Corp.**, Unimax Switch Div., Dept. NED, Ives Road, Wallingford, Conn.

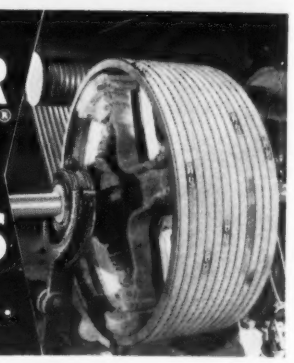
▲ For more details circle NED-479 F8 on enclosed inquiry slip ▲

LINEAR SETTING GAGE
provides settings to 0.0001 in.

Longitudinal, crosswise, or vertical settings to 0.0001 in. can be made with the Scan-A-Scale, a precise linear measurement instrument. It consists of a microscope, viewed at normal reading distance, and a precision engraved steel scale graduated in 0.050-in. spacings. Readings on the optical instrument are direct and independent of backlash, gear or thread wear, oil film thickness, or pressure and spring loadings. An over-all accuracy of ±0.00025 in. is possible. Six models with 12, 24, 36, 48, 60, or 72-in. scales are available, each with mounting brackets and voltage controller. Made by **F. T. Griswold Mfg. Co.**, 315 W. Lancaster Ave., Wayne 3, Pa.

▲ For more details circle NED-480 F8 on enclosed inquiry slip ▲

ALLIGATOR® V-BELT FASTENERS



make this possible ...

Now you can keep costly "downtime" at a minimum (no need to dismantle machinery) ... make up special size V-Belts quickly ... simplify the replacement of worn or damaged V-belts.

Remember: Open-end V-Belting assures you of ...
- Far less stretch than other "connected-type" belting
- Top drive performance—greater traction surface between drive belt and sheave.

And! ... Alligator V-Belt Fasteners provide one strong joint ... terrific holding power!

FOUR TYPES ...
- Regular Alligator V-Belt Fasteners for B, C, D, E and BB V-Belting.
- Aluminum • Monel
- Permanently Assembled Fasteners.

ORDER FROM YOUR DISTRIBUTOR OR WRITE TO ...

Flexible STEEL LACING COMPANY
4664 LEXINGTON ST. • CHICAGO 44, ILLINOIS

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TAKE IT EASY...

Versatile PORTER CUTTERS—there are over 100 different models and sizes — hand or power operated. They save you man-hours, man-power, and money, too! The PORTER CUTTER catalog gives you illustrated, descriptive details! Send for your copy TODAY!

For prompt service contact your Industrial Supply Distributor ... and write today for your free PORTER CUTTER CATALOG!

CUT — up to ¾" rods with HAND OPERATED TOOLS — up to 1⅜" rods and 2½" power cable with POWER OPERATED TOOLS.

H. K. PORTER, INC. Somerville 43, Mass.

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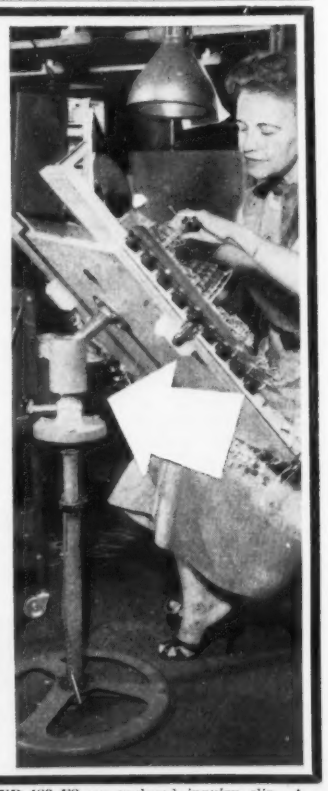
POWRARM IN ... PRODUCTION UP! UP! UP!



FRIDEN INCREASES WORKER EFFICIENCY WITH PowRarm! By using Wilton PowRarm Work Positioners as the basic unit of adjustable assembly boards, **Friden increased production through a savings of operator time, motion, and assembly space.** PowRarms allow 360 degrees rotation of the new boards, and workers can incline them at various angles. May be mounted on benches, conveyors, or floor stands as illustrated. Many firms use PowRarms for inspection, servicing, soldering, assembly, and any work positioning operation. Ask your Wilton distributor for a demonstration.

WRITE FOR FREE 52 PAGE CATALOG!

WILTON
TOOL MFG. CO., INC.
Schiller Park, Ill.

Sold by leading distributors the world over!
NED-68

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HOT SPRAY IMPROVES QUALITY, CUTS COST AT GIBSON REFRIGERATOR CO.

In 1957 Gibson Refrigerator Company reduced the number of primer coats on air conditioner parts from two to one and got a better finish by switching to Spee-Flo Hot Spray at their Belding, Mich., plant. Again, in 1958, with additional Spee-Flo units and a special enamel, they were able to adopt a single, combination primer-finish-coat process. *Result:* further improvement in appearance and service life and still greater economies.

Invariably Spee-Flo users report improved coverage, elimination of runs and sags, faster drying, a longer-lasting, better-looking finish. And with these quality improvements, they get a bonus of saving in time and materials, with virtually no maintenance cost for equipment.

Find out what Spee-Flo Hot Spray Systems can do for *you.* Write for free case history booklet: "Why Hot Spray?" The Spee-Flo Company, 6614 Harrisburg, Houston 11, Texas.

122

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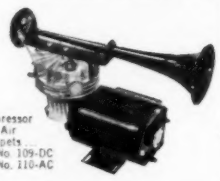
A gentle chime . . . a BLASTING horn

. . . or a complete audio-visual communication system



Compressor Type Air Trumpets Cat. No. 109-DC Cat. No. 110-AC

You can depend on Sperti Faraday for the latest in sound and sight communications. For complete information write: Sperti Faraday, Adrian, Michigan. In Canada—write Sperti Faraday of Canada, Ltd., Montreal.

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Contact Devices

Since 1875 Designers and Producers of Visual and Audible Signals

Sperti Faraday Inc.

ADRIAN, MICHIGAN

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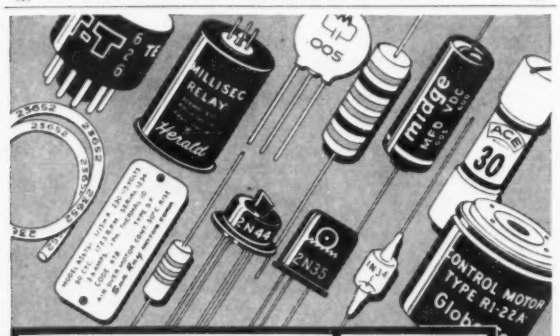
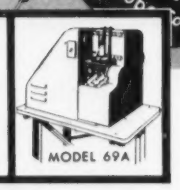


FAST, CLEAR
COMPONENT MARKING
with
MARKEM MACHINES



Typical marking problems solved by Markem include automatic color banding with up to six colors on wire lead components; printed circuit work on the new 90S screen process machine; base branding TV tubes in cartons and in sets; imprinting flat disc capacitors, ten foot lengths of rigid conduit, metal and glass tubes, odd-shaped automotive electrical parts.

Ask Markem to study your needs, then recommend the right machine, marking element and compound for your job. Forty-six years of marking experience are ready to help you. Write for Data Sheets

MARKEM MARKEM MACHINE CO. KEENE 3, NEW HAMPSHIRE

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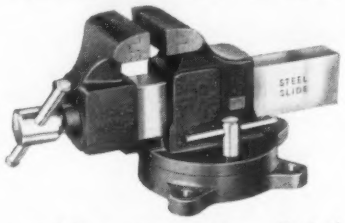
MACHINIST VISE jaw inserts are pinned on

Improvements embodied in the Simplex machinist vise include hardened tool steel jaw inserts which are firmly pinned on to eliminate screw holes and screw heads in the jaw surface. They are easily replaced when worn. Corrugated head, forged steel bolt meshing into V-grooves in the base assures positive locking of swivel base models in any position. Swivel and stationary bases are interchangeable. Made by **Desmond-Stephan Mfg. Co.**, 137 S. Walnut St., Urbana, Ohio.



▲ For more details circle **NED-487 F8** on enclosed inquiry slip ▲

TAPE-CONTROLLED MACHINE TOOL affords true-circle cutting and keyboard program in one system

Smooth continuous circular contours, or true circles, are cut in metal by this Morey A-50 machine tool which is controlled by a Digimatic keyboard programming system. Compact control unit occupies less than 12 sq ft of space, yet can run a 4 x 4-ft bed-type machine with a 30-hp spindle, in a full three-axis operation, including lines and circles.

Cutting speeds up to 100 ipm are available, with tolerances down to 0.001 in. Machine also has microdials for positioning and pushbuttons for operation as a conventional milling machine. Using ½-in. magnetic tape operating at 7½ ips, a full hour of machining can be accommodated on a 2400-ft roll of tape. Spindle speed range from 20 to 3600 rpm allows machining heat-treated steels as well as the softer metals and alloys.

Design features include antifriction mounting of components, roller-bearing saddle and table mounting, recirculating ball-nut lead screws, and antibacklash hardened gears throughout. Machine also has high-power magnetic amplifiers. Announced by **Stromberg-Carlson Co.**, Electronic Control Systems Div., 2231 S. Barrington Ave., Los Angeles 64, Calif.

▲ For more details circle **NED-488 F8** on enclosed inquiry slip ▲

FRESH IDEAS

. . . for product improvement

Here's an easy way to make a dramatic change in the personality of your product: make the grille, screen, guard, etc., of Penmetal Multimesh.

These distinctive new expanded metal patterns* provide a handsome, fresh appearance—used wherever perforated metal, woven wire, decorative louvers or small-mesh expanded metal have been applicable in the past.

Free folder 516-EM tells all about Multimesh. Write today.

PENN METAL COMPANY, INC.
***General Sales Office:* 40 Central Street, Boston 9, Mass.**
***Plant:* Parkersburg, W. Va.**

*Design patents pending on all patterns. PM-180

▲ For more details circle **NED-489 F8** on enclosed inquiry slip ▲

STICHT TACHOMETERS

FOR EVERY NEED . . . EVERY SPEED

CENTRIFUGAL HAND TACHOMETERS

Universal Type UO with 5 ranges in one instrument. With overspeed protection.

CAT. NO. 303, 30-12,000 RPM
CAT. NO. 314, 45-18,000 RPM
CAT. NO. 322, 60-24,000 RPM
CAT. NO. 346, 120-48,000 RPM

Many other models with one, three or five ranges. BULLETIN 750

CHRONOMETRIC HAND TACHOMETERS

"Jaquet" Speed Indicators with built-in chronometer movement. Timing period 3 or 6 seconds. Guaranteed accuracy 1/2 of 1 per cent. Various accessories.

CAT. NO. 2301, 0-10,000 RPM
CAT. NO. 2302, 0-1,000 RPM
CAT. NO. 2304, 0-100 RPM

Suitable double rated speed. BULLETIN 735

CENTRIFUGAL STATIONARY TACHOMETERS

For permanent mounting on machines. Model J. Sizes 3 in., 4 in., 5½ in., 8 in. and 10 in. dial diameters. Flexible cable driven. Many standard ranges reading RPM, FPM, YPM, etc. BULLETINS 794, 795, 796

VIBRATING REED TACHOMETERS

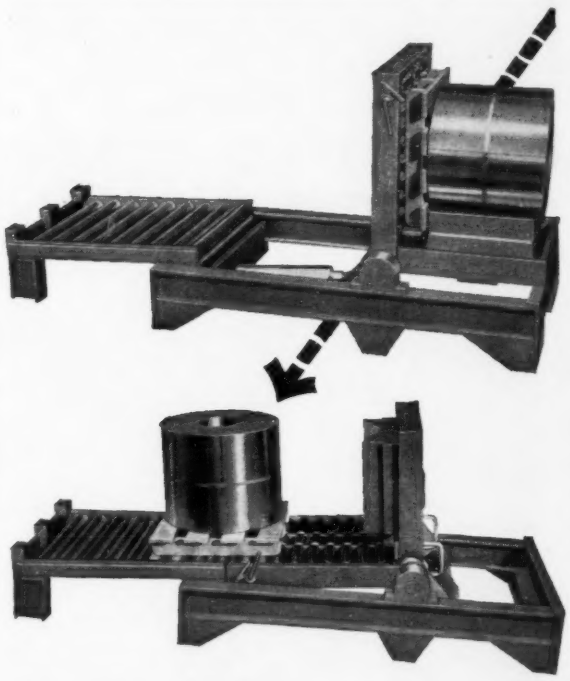
PORTABLE AND STATIONARY

Measure speed by touch. Many different ranges from 900-100,000 RPM.

WRITE FOR BULLETIN 770-A

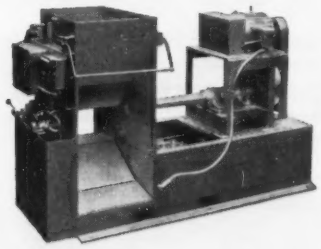
HERMAN H. STICHT CO., INC.
27 PARK PLACE, NEW YORK 7, N.Y.

▲ For more details circle **NED-490 F8** on enclosed inquiry slip ▲



Coil handling made easy with this portable self-contained tilter

Coils of steel, tinplate, brass, aluminum, and other metals are easily tilted from horizontal to upright or upright to horizontal position, with this portable coil tilter. Completely self-contained, it is hydraulically actuated from a single electric motor power source. It can be moved from one position to another in the plant by crane, and will handle coils weighing up to 20,000 lb, centering them on pallets up to 52 in. square. It will tilt a 20,000 lb coil in 20 seconds.



Slitting mill edge-trim and scrap wire are tightly balled and automatically ejected from this Salem-Brosius scrap baller.

SALEM-BROSIUS, INC.
16 Arch Street • Carnegie, Pa.

In Canada: Salem Engineering Limited • 1525 Bloor St. W., Toronto 9, Ontario

▲ For more details circle **NED-491 F8** on enclosed inquiry slip ▲

There's a HOOD Glove that fits it best

No one glove is suitable for all work conditions. That's why HOOD makes 29 different kinds of rubber, neoprene and plastic work gloves. Each one is specially designed to meet certain specific requirements.

Hood's famous Glove Guide takes the guesswork out of glove selection. Send for your free copy today.

HOOD RUBBER CO.,
a division of B. F. Goodrich Company
WATERTOWN, MASS.
RUBBER • NEOPRENE • PLASTIC INDUSTRIAL GLOVES
For more details circle NED-493 F8 on enclosed inquiry slip

FRONT-END LOADER
44-hp unit carries 2500 lb

Although larger and heavier than previous payloader models, this rubber-tired, front-end Model H-25 loader with 2500-lb carrying capacity operates in and out of

boxcars having 6-ft doors. Turning radius is 6 ft to outside rear hub. Unit has power steering, a full-reversing two-speed power-shift transmission, and a torque converter. It is offered with 44-hp gasoline, diesel, or LP-gas engines and has a 12-v electrical system. For handling dense, compacted materials, the H-25 has breakout force of 4500 lb and provides bucket tip-back of 40 degrees at ground level. Maximum dumping height clearance is 5 ft 4½ in. Various front-end attachments are interchangeable. Made by **Frank G. Hough Co.**, 746 Seventh Ave., Libertyville, Ill.

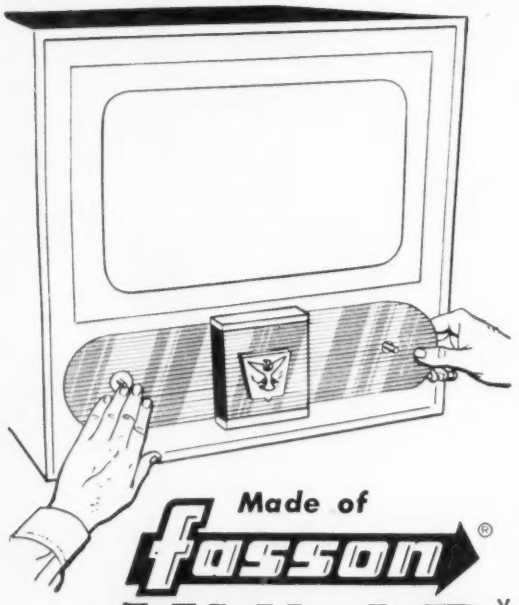
For more details circle NED-495 F8 on enclosed inquiry slip

Our creative engineers have solved the production problems of many manufacturers with ingenious fabrications of soft, flexible plastic. Perhaps we can solve your problem. The possibilities of flexible plastic are boundless. Size or shape are no limitation. We can cut, form, stitch, or thermo-seal any article you need — and equip it with zippers, grommets, snaps, hooks, etc. We have had years of experience in solving the seemingly impossible with practical applications of soft vinyl fabrications. Call on us for advice . . .

POLO PLASTICS CO.
1718 N. 1st ST., MILWAUKEE 12, WIS.
Design and engineering counsel available. Write us for information.

For more details circle NED-498 F8 on enclosed inquiry slip

NEW!
Self-Adhesive Metallic Trim



Made of **fasson** MYLAR*

Distinctive Beauty
- **Many Colors and Patterns** . . . shimmering metallic finishes . . . smooth or embossed . . . in stock.
- **Tough** . . . tarnish-proof . . . resists abrasion . . . isn't damaged by moisture, temperature or most chemicals.
- **Easily Printed** . . . with your product's name, trademark, other designs.
- **Unlimited Uses** . . . for trim, nameplates, emblems, kick-pads, etc.

Reduces Costs
- **Cuts Parts Costs** . . . no expensive forming dies . . . no anodizing . . . fits contours easily.
- **Speeds Assembly** . . . peel off backing paper . . . press in place . . . no screws, fasteners, glue or special skills needed.
- **Adheres Permanently** . . . to any clean, smooth surface. Our S-201 high tack adhesive holds tighter with time.

Mail Coupon NOW for details and samples of Fasson MYLAR

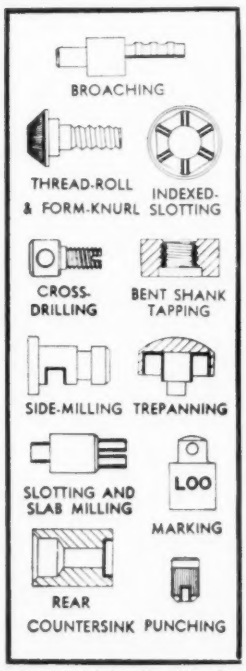
Fasson Products
Dept. N-6-J 250 Chester St., Painesville, Ohio
Please send me complete information about Fasson MYLAR
Name _____
Title _____
Company _____
Address _____
City _____ Zone ____ State _____
Representatives in principal cities. Write for the name of the one nearest you.

* "Mylar" is DuPont's registered trademark for its brand of polyester film.

For more details circle NED-494 F8 on enclosed inquiry slip

PRECISION PARTS
operations synchronized

Low costs and quality production result from the use of Automation Machining, a combination of metal removing operations that is synchronized mechanically or electronically in one machining cycle. Among the 20 operations that can be synchronized into a single cycle are broaching, thread rolling, form knurling, indexed slotting, cross drilling, bent shank tapping, side milling, trepanning, slotting and slab milling, marking, rear countersinking, and punching (see illustration). A folder describing the process is available from its developer. Custom parts can be made to users specifications in any quantity. Service developed by **Teale Machine Co.**, 1425 University Ave., Rochester 7, N. Y.



For more details circle NED-496 F8 on enclosed inquiry slip

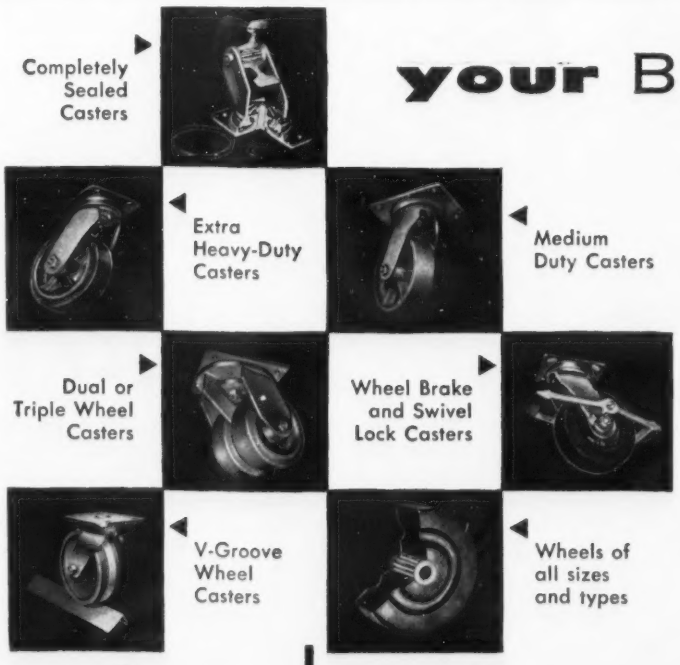
HOW TO REDUCE TOOL EXPENSE

Free booklet shows how specific plants cut costs with McCaskey Tool Crib Controls!

Send today! Booklet contains actual reports and detailed procedures. Shows how McCaskey Tool Crib Controls help eliminate costly tool idleness, loss and theft, high breakage and unbalanced production inventories—all without any increase in crib personnel. Ask for *Free Booklet* NED-658.

McCASKEY INDUSTRIAL CONTROLS
PRODUCTION • INVENTORY • TOOLS • MAINTENANCE • COSTS
Division of
VICTOR ADDING MACHINE CO.
Manufacturers of Business Machines, Cash Registers, Business and Industrial Systems, Electronic Equipment, Electri-Cars
3900 N. Rockwell Street Chicago 18, Illinois

For more details circle NED-499 F8 on enclosed inquiry slip



your BEST move!

ALBION *industrial...* CASTERS

Albion casters checkmate your materials handling problems. They are versatile, dependable, economical and available *right now*. Whether you need a caster for light, medium, heavy or extra heavy duty requirements—standard or special—Albion casters are the practical answer.

Albion casters are available in every conceivable range of Industrial size, type, capacity and desired wheel type to suit your needs.

Make the *best* move...get all the facts on Albion Casters today. Write, wire or phone for the information you need. Albion is always at your service.

Do it now... request your copy of the Albion Caster and Wheel catalog. Yours for the asking.

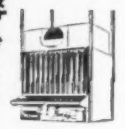
ALBION INDUSTRIES, INC.
Distributors in Every Strategic City
Main Plant: ALBION, MICHIGAN

For more details circle NED-497 F8 on enclosed inquiry slip

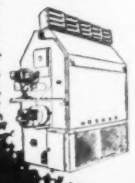
MODERN HEATING FOR INDUSTRY

Reznor gas heaters offer the efficient, economical answer to all these heating problems:

- complete heating systems for new buildings
- replacement of obsolete heating systems
- supplemental heating for trouble spots
- heating for auxiliary buildings
- heat for curing, drying and other process applications



With suspended, duct and free-standing types in all appropriate sizes from 25,000 to 2,000,000 Btu, the Reznor line includes the equipment which is exactly right for *your* plant heating job.



For complete details, write today for your copy of Bulletin GN-57 or give your nearby Reznor distributor a call. You'll find him listed under "Heaters-Unit" in the Yellow Pages.

REZNOR
WORLD'S LARGEST-SELLING DIRECT-FIRED UNIT HEATERS

Reznor Manufacturing Company, 41 Union Street, Mercer, Pennsylvania

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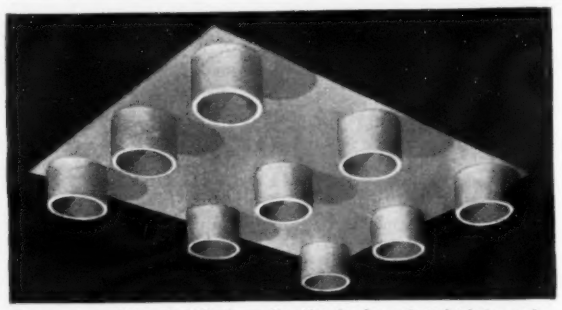


Bottom view of Signode "Chuckaway" pallet showing patented tubular posts.

New... improved... expendable

Low Cost Signode Chuckaway pallets are low in first cost; eliminate maintenance costs, save storage space.

Light weight Cut shipping costs every mile, every load. Easy and clean to handle.

Strong Rugged construction proved in use and in famous Signode testing laboratory.

Versatile Standard or special sizes. Post placement variable. Tray or flat tops.

Expendable No returns, so no shipping or record-keeping or storage costs on returns.

Competent Signode assistance on expendable pallet design and unitizing methods is available. For information and Signode Chuckaway pallet details, write:

SIGNODE STEEL STRAPPING CO.
Dept. SP, 2643 N. Western Avenue, Chicago 47, Illinois
Offices coast to coast.
Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

▲ For more details circle NED-501 F8 on enclosed inquiry slip ▲

FOR PRECISION MACHINING TO CLOSE TOLERANCE

SUPER 60 POWER QUILL

High speeds combined with high torque make PRECISE Super-Speed POWER QUILLS the finest tools for precision grinding, milling, and finishing. They can be quickly mounted—with PRECISE mounts—on standard and special machine tools to do the work of single-purpose machines costing many times more.

PRECISE Super 60 POWER QUILL provides spindle speeds up to 45000 rpm with a ½ hp motor and operates from ordinary 110v or 220v power supplies. Its rigid steel housing, precision spindle, and collet chuck permit work tolerances to within .0001 inch. Other models available from 7000 rpm to 45000 rpm with power ratings to 1½ hp. Send for complete catalog.

Precise

Power Quills Grinder Millers Milling Machines Accessories Cutting Tools Vapor-Lub Cooling Systems
Quality and Precision Since 1882

PRECISE PRODUCTS CORPORATION
3752 BLUE RIVER ROAD, RACINE, WISCONSIN, U.S.A.
BRANCH PLANT: PRECISE G.m.b.H., DUESSELDORF, GERMANY

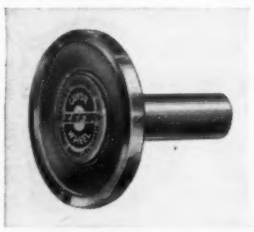
▲ For more details circle NED-502 F8 on enclosed inquiry slip ▲

INDUSTRIAL SHEARS
tension set for varied materials

A small coin or a screwdriver may be used to set the blades of the Deluxe Kleencut No. 174 industrial shear for cutting a wide range of materials. Once set, the Micro-Tension adjustment will hold without slipping until changed by the user. Long handles and short blades provide the leverage required for cutting such tough materials as rubber, plastic, leather, thick cardboard, and light metals. Over-all length is 7½ in. and cutting edge is 3 in. Price is $1.89. Made by **Acme Shear Co.**, Dept. NED, 100 Hicks St., Bridgeport, Conn.

▲ For more details circle NED-503 F8 on enclosed inquiry slip ▲

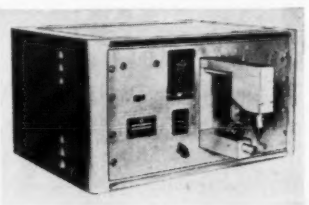
BAND SAW GUIDE WHEEL
ball bearing type allows high speed



High speeds, heavy loads, and long band saw life are made possible by this Zefyr ball bearing guide wheel which fits all standard No. 1 and No. 0 band saw guides. Wheel has honed, balanced raceways and micro-lapped, matched, chrome steel balls. It is permanently lubricated and has Teflon seals. The 2 13/16-in. diameter Model CP-10 allows up to 12,000-fpm blade speed, whereas the 1 15/16-in. diameter Model CP-20 allows up to 10,000-fpm speed. Allowable thrust loads range up to 150 and 75 lb, respectively. Made by **Carter Products Co.**, 421-A Wm. Alden Smith Bldg., Grand Rapids 2, Mich.

▲ For more details circle NED-504 F8 on enclosed inquiry slip ▲

MULTI-USE WELDER
has integral hydraulic weld head



A 2.5-kva welding transformer, integral hydraulic weld head, and a choice of welding controls are enclosed in the standard cabinet of this multi-use welder. Suited for aircraft components, electronic tubes and components, jewelry, and light-gage metals, the welder has a foot pedal hydraulic actuator and easily adjusted automatic weld firing pressure ranging from 0.5 to 100 psi. These welding power supply timing components are offered: Fractional cycle timer; storage flux welder (vacuum switch unit for tungsten welding); ½ to 10-cycle control (capable of welding 0.081-in. No. 321 stainless steel); and a 2-20 cycle control. Made by **Vacuum Tube Products Co.**, Dept. RW1, 2020 Short St., Oceanside, Calif.

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Gain the economies of AUTOMATION!

Model 3 — 26-ton capacity

NEW chain-driven FEDERAL dial feeds

Federal Dial Feeds eliminate the need for specialized, costly machinery; step up production many times. May be equipped with automatic feeds and ejectors. Rotating table is driven by automotive timing gear-type chain. Index and work plates operate on thrust bearings. Shot pin with tapered bushing assures accuracy. Rugged. Precision built. Eight sizes. Six to eighty ton capacities. Call your dealer or write today.

FEDERAL PRESS CO.
806 Division St., Elkhart, Indiana

FEDERAL DIAL FEED PRESSES
33 Years' Experience in Dial Feed Engineering and Construction

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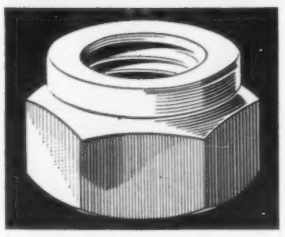
Specify standard FLEXLOC® microsize locknuts



- One-piece, all-metal construction
- Resilient locking section
- Controlled locking torque
- Lock and stop nut in one
- Every thread carries its full share of the load
- Made to Class 3B fit

Smaller than regular FLEXLOCs of the same nominal diameter, FLEXLOC microsize locknuts make possible smaller mating joints and flanges. Standard materials are brass (plain or cadmium plated) and aluminum (plain or chemically treated), for temperatures to 250°F; alloy steel and 18-8 stainless steel, for temperatures to 550°F. They are available in sizes #0 through #4 at your industrial distributor's. See him for details. Or write for literature, samples, information on other materials. Flexloc Locknut Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

FLEXLOC® LOCKNUT DIVISION
STANDARD PRESSED STEEL CO.
SPS
JENKINTOWN PENNSYLVANIA

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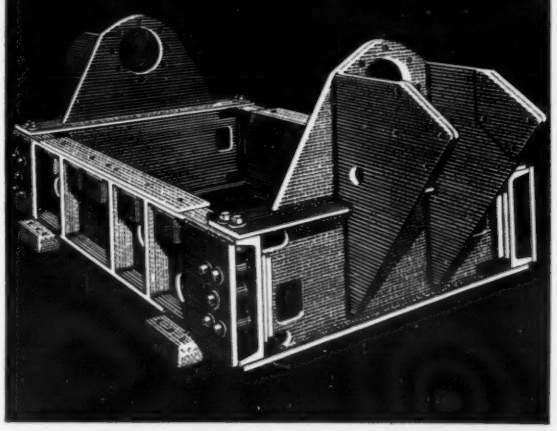
We'll make it from ALUMINUM!



WELDED ENGINE BASE

JAMMED UP? Alcoa's Jobbing Division can shake you loose, on complicated or long-run jobs in fabricated aluminum. Complete engineering-fabricating facilities, backed by the world's largest research organization. Also many standard products: shipping drums, vessels, tote boxes, pallets, phone booths, farm gates, electronic cabinets, process equipment, welded tubes, tanks.

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Fully illustrated 16-page booklet describes in detail Alcoa's unmatched facilities for welding, rolling, brake forming, bending, spinning, finishing, testing, complete engineering-fabricating services.

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1951-F Alcoa Building, Pittsburgh 19, Pennsylvania
Please send my free copy of *Alcoa Aluminum Fabricating Facilities.*

Name _____ Title _____
Company _____
Street Address _____
City _____ State _____

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PERMANENTLY INSTALLED Hytrol CONVEYORS

This Hytrol Model F Conveyor moves materials floor to floor with cost-saving speed and efficiency. Additional sections and attachments make it readily adaptable to expanding needs. Write for catalog of complete Hytrol line.

HYTROL Conveyor Co. INC.
1957 S. 54th Street Milwaukee 19, Wis.

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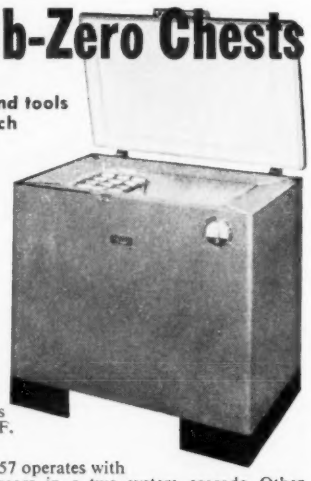
REVCO Sub-Zero Chests

- for shrink fits
- for seasoning gauges and tools
- for testing • for research
- for processing to −140°



Model RSZ503 Rivet Cooler (shown) equipped with 90 rivet canisters, temperatures to −30° F. 110V, 60 cycle, single phase.

Model SZH153 with temperatures to −95° F. 110V; 60 cycle, single phase.

Model SZH653, larger capacity, temperatures to −85° F. 110V, 60 cycle, single phase.

Model SZHC657. Same capacity as SZH653 but attains temperature as low as −140° F. 220V, 60 cycle, single phase.

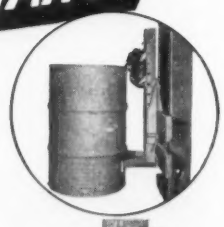
Refrigeration: Model SZHC657 operates with 3 Tecumseh hermetic compressors in a two system cascade. Other Sub-Zeros use 2 hermetics in a two stage system. Rivet Cooler operates with single hermetic unit. All models equipped with efficient fan-cooled condensers—no liquid coolant required. *Write Today for Full Specifications and Prices.*

Description	Model	Cu.Ft.	Temp. Range		Outside Dim.			Inside Dim.		
			Rm. 70°	Rm. 110°	L	W	H	L	W	H
Sub-Zero	SZH153	1.5	−95° F.	−85° F.	42"	28"	42¾"	23"	9"	12½"
Sub-Zero	SZH653	6.5	−85° F.	−75° F.	60"	28"	42¾"	47"	15"	16"
Sub-Zero	SZHC657	6.5	−140° F.	−125° F.	60"	28"	42¾"	47"	15"	16"
Rivet Cooler	RSZ503	5.0	−30° F.	−20° F.	42"	28"	41"	30"	16"	18"

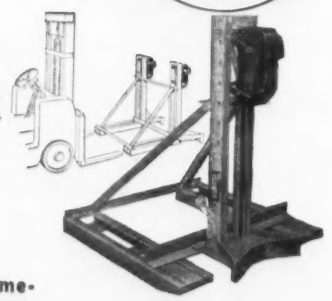
REVCO, Inc.
Setting Trends in Refrigeration since 1938 Deerfield, Michigan

▲ For more details circle NED-510 F8 on enclosed inquiry slip ▲

USE THE LIFT-O-MATIC POWER TRUCK ATTACHMENT



for HANDLING DRUMS with a POWER FORK TRUCK WITH FORKS LEFT ON OR REMOVED



Simple, automatic, mechanical handling of any size or type of drum—single or multiple.

WRITE FOR CATALOG

MARVEL INDUSTRIES, Inc.
2246 CLEVELAND ST., EVANSTON, ILLINOIS

▲ For more details circle NED-511 F8 on enclosed inquiry slip ▲

FASTENING & DRILLING TOOL for use in concrete, brick, and tile

Multipurpose R - 360 tool combines a masonry drill holder with a regular Shure-Set hammer-in tool. User can thus fasten directly into concrete, cinder block, and mortar with the same tool he uses to drill holes into such brittle materials as face brick or tile. It will drive ¼-in.-20 thread studs through up to 3/16-in. steel. Tool sets studs as well as nonthreaded fasteners. It sells for $12.95. Professional model R-150 for heavier fastening work sells in a kit for $27.95. Kit consists of tool, a 2½-lb hammer, a leveling plate, and fastener apron. Made by **Olin Mathieson Chemical Corp.**, Ramset Fastening System, 12119 Berea Rd., Cleveland 11, Ohio.

▲ For more details circle NED-512 F8 on enclosed inquiry slip ▲

DIAPHRAGM GLOBE VALVES for 150 and 300-psi service

Diaphragm - operated, direct-acting globe valves for hot or cold service with steam, raw water, gas, and air are available in 150 and 300-psi ratings in sizes from ¼ to 3 in. NPT. Valve bodies are Navy M bronze, and all cast trim is bronze alloy. Top-guided stem and disc are K-Monel, and replaceable seat ring is hardened and ground stainless steel. Diaphragm tops are designed for air operation at 30-35 psi. Made by **Sinclair-Collins Valve Co.**, Dept. NED, 454 Morgan Ave., Akron 11, Ohio.

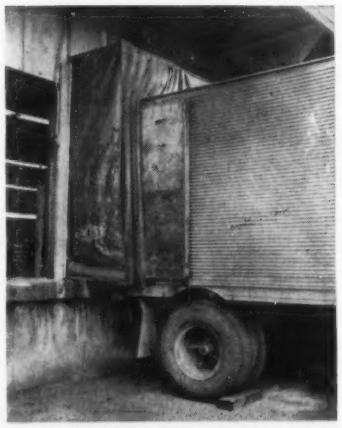
▲ For more details circle NED-513 F8 on enclosed inquiry slip ▲

55-GAL DRUM CART can be equipped with hand pumps

Easy loading and unloading of 55-gal drums is possible with the Easy-Load drum cart. Its lifting cradle is raised to a vertical position and the drum is positioned and locked to it. Self-seal connectors are screwed into the bungs and the drum is tilted to a horizontal position. Suction line to an iron or bronze hand-operated pump is quickly connected with a self-seal fitting. Filters are available, if required. The Bean 44-K pumping unit with a 3-gpm capacity at 300 psi is optional. With a 33-K pumping unit, the cart can be used for spray application of materials. Cart has a tow bar-actuated parking brake. Made by **Food Machinery & Chemical Corp.**, John Bean Div., Dept. 1C-40, Box 145, San Jose 3, Calif.

▲ For more details circle NED-514 F8 on enclosed inquiry slip ▲

TRUCK-DOCK SHIELD protects loading from weather



Employing a spring-tensioned upper frame, a weighted front curtain, and sliding front curtains, Snug - Fit truck - dock shelter affords position protection in any weather. Because it fits snugly to truck, it is particularly suited for refrigerated dock and truck use. When retracting to the building, it lifts free of truck and stores within 9 in. of the building. On wider than the 10½-ft units, it can be furnished with spring tensioned arms to hold sides of the cover snugly to the truck sides. Made by **Frommelt Industries**, Dept. S.A., Box 419, Dubuque, Iowa.

▲ For more details circle NED-515 F8 on enclosed inquiry slip ▲

work·O·matic handling system

offers you increased production at lower cost

Get the complete story on this cost-cutting material handling system by contacting The Union Metal Manufacturing Company, Canton 5, Ohio.

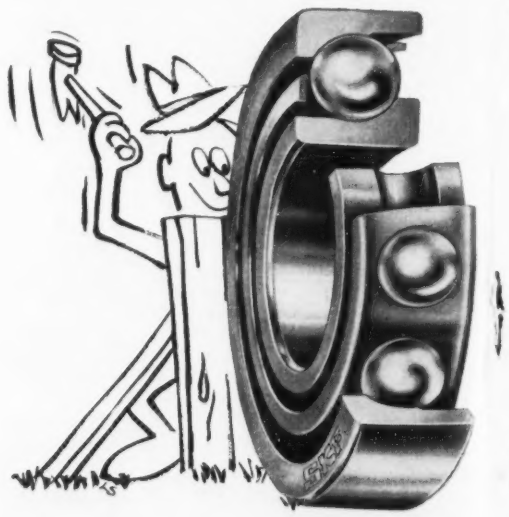
UNION METAL
Material Handling Equipment

▲ For more details circle NED-516 F8 o

"Fusetron dual-element fuses protected 150 motors against burnout when a hurricane single phased our primary line". . . EDWARD ACKERMAN, Chief Electrician
The Manhattan Shirt Co., Paterson, New Jersey

Play Safe! Install FUSETRON Fuses and BUSS Hi-Cap Fus

▲ For more details circle NED-517 F8 o



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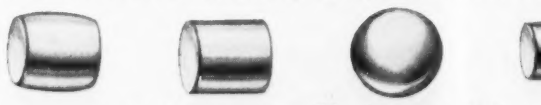
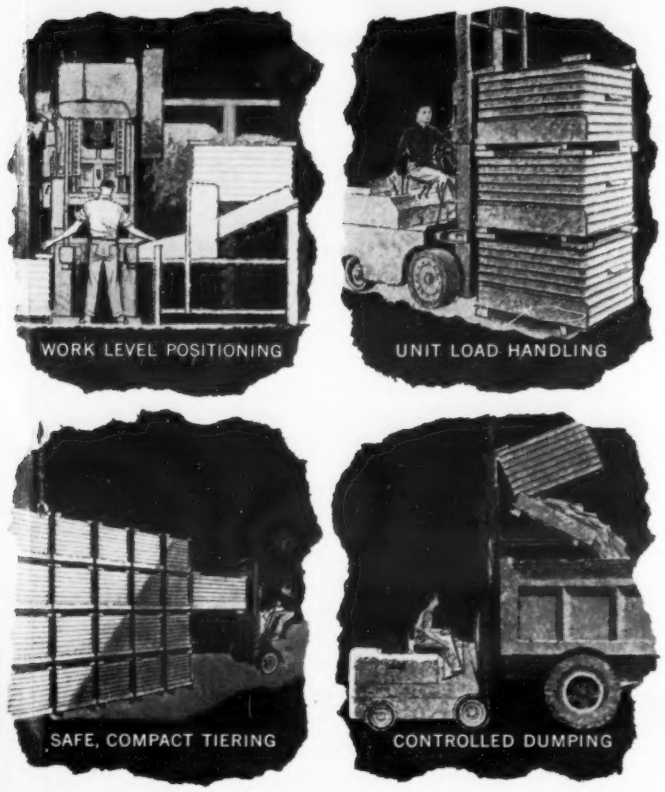


Spherical, Cylindrical, Ball, and "Tyson" Tapered Roller Bearing

▲ For more details circle NED-518 F8 o



NED-516 F8 on enclosed inquiry slip ▲

Mr. Ackerman continues . . .

"One afternoon a hurricane struck and single phased the line feeding our plant.

"At the time, all 150 of our sewing machines were in operation. No one suspected the motors were running single phase. Our first warning came when the machines started shutting down through the plant as Fusetron fuses began blowing to protect the motors.

"I had no idea in what condition we would find the motors. It was certainly a relief when we checked and did not find one damaged sewing machine motor. Around 300 Fusetron fuses had blown to protect them.

"You can imagine how costly it would have been to repair or replace these ½ hp., 3 phase, 220 volt motors — and our plant would have been out of business while this work was being done. So we think we paid a very small price when our only expense was replacing the 3-2/10 ampere Fusetron fuses.

"Since this experience, our seven other plants have been informed of the above incident, and it has been suggested to them, that they protect all sewing machine motors with Fusetron dual-element fuses."

DON'T RISK LOSSES! One lost motor . . . one needless shutdown . . . one destroyed switch or panel . . . one burned out solenoid . . . may cost you far more than replacing every ordinary fuse with Fusetron dual-element Fuses.

FOR LOADS ABOVE 600 AND UP TO 5000 AMPS. — USE BUSS HI-CAP FUSES! When coordinated with Fusetron fuses they will not open ahead of the fuse nearest fault . . .

For more information ask for bulletin FIS on FUSETRON dual-element Fuses — bulletin HCS on BUSS Hi-Cap Fuses.

Bussmann Mfg. Division, *McGraw-Edison Co.*
University at Jefferson, St. Louis 7, Mo.

FUSETRON 658 — TRUSTWORTHY NAMES IN ELECTRICAL PROTECTION — BUSS

Hi-Cap Fuses throughout entire Electrical System!

NED-517 F8 on enclosed inquiry slip ▲

The Authorized
SKF *Distributor*
backs up his bearings

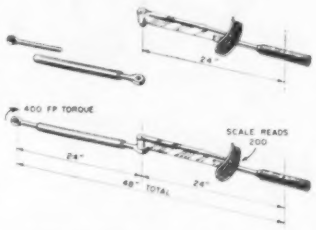
He gets behind them with the kind of training and experience that keeps them rolling smoothly for you. Such service can simplify your problems all-'round, from purchasing through production. So why not take advantage of his special services today? 7841

EVERY TYPE—EVERY USE
SKF®
SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.
Roller Bearings
*REG. U. S. PAT. OFF.

NED-518 F8 on enclosed inquiry slip ▲

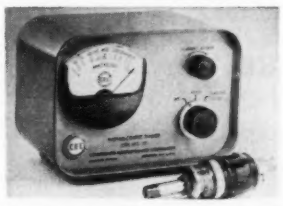
TORQUE WRENCH EXTENSIONS
double torque capacity of tools

Doubling the effective length of OTC torque wrenches with extensions enables them to handle up to twice their rated capacity. For example, a 150-ft-lb wrench can produce up to 300 ft-lb with the same pull on the handle. Extensions are made up of a tubular steel adapter arm with square opening to fit the torque wrench drive, and one of the various drive-end accessories. Latter includes box wrenches, 15-degree and double-offset wrenches, ratchet and fixed ¾, 1, and 1½-in. drives. The dial reading is multiplied by two to compute the exerted torque. Made by **Owatonna Tool Co.,** 436 Cedar St., Owatonna, Minn.



▲ For more details circle NED-519 F8 on enclosed inquiry slip ▲

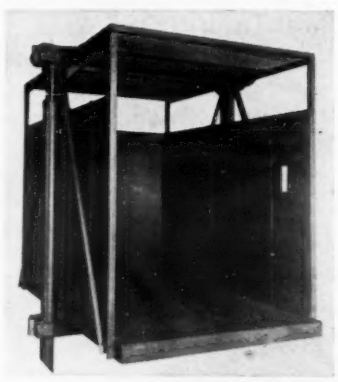
VACUUM GAGE
battery-operated, thermocouple type



Powered by a 1.5-v Size D flashlight battery, the Type GTC-110 single-station thermocouple vacuum gage covers a range from 0 to 1000 microns Hg on one non-linear scale. Five microns is the smallest indicated marking. Recalibration is easily accomplished without a reference gage. Provision is made for checking the heater current setting by means of a potentiometer knob on the gage front. Compact gage also serves as a moderately sensitive leak detector throughout its range. The all-metal TG-77 sensing tube is not harmed by exposure to atmosphere. Made by **Consolidated Electrodynamics Corp.,** Rochester Div., 1775 Mt. Read Blvd., Rochester 3, N. Y.

▲ For more details circle NED-520 F8 on enclosed inquiry slip ▲

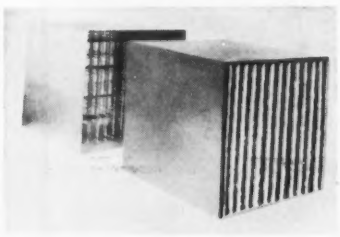
HYDRAULIC ELEVATOR
cylinder clusters mounted to frame



Cylinders of this hydraulic elevator are mounted to the cab frame in clusters of three on each side. One cylinder in each cluster has the same piston area as the other two combined. The two large pistons operate first, raising cylinder clusters and car to maximum stroke. Smaller pistons on each side then take over, raising the elevator the rest of the desired height. There is no change in elevating speed, and an equalizer insures that each cluster will rise at the same rate regardless of weight distribution on the platform. Capacities range to 10,000 lb and lifts, to 20 ft. Made by **Field Engineering Products Co.,** 66 Foote Ave., Jamestown, N. Y.

▲ For more details circle NED-521 F8 on enclosed inquiry slip ▲

HIGH VELOCITY AIR FILTER
depth increased from 12 to 24 in.

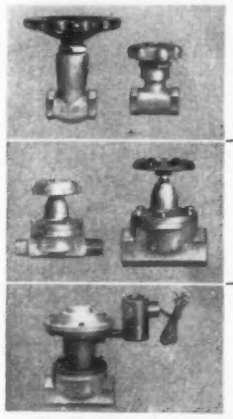


Increase in depth of this high velocity Aerosolve air filter to 24 in. from the standard depth of 12 in. increases media area from 43 to 86 sq ft. Face velocity is thus raised from 250 to 450 fpm and capacity from 1000 to 1800 cfm. Unit consists of a permanent, cadmium plated, steel frame with an assembled, easily replaceable, filter cartridge. Three cartridges are available, providing efficiencies of 95, 85, and 35 per cent, based on discoloration test using atmospheric dust. Unit adapts to comfort systems as well as many ventilating and air conditioning systems. Initial pressure drops for various cartridges range from 0.25 to 0.45 in. Made by **Cambridge Filter Corp.,** Dept. 101, 738 Erie Blvd. E., Syracuse 3, N. Y.

▲ For more details circle NED-522 F8 on enclosed inquiry slip ▲

New from **AIRCO–**
5 FORGED BRASS VALVES
for gases and liquids . . .

Here are five new forged brass valves offering many unusual, high efficiency, low maintenance features. Developed, proved, and extensively used by Air Reduction in high pressure gas piping systems, they're now offered to industry.



Master Valves • 3000 psi • ½"–⅜" —For both all-on-all-off and throttling. Special Kel-F and Fiber Glass compound seating provide tight shut-off and high impact resistance.

Non-Return Shut-Off • 250 psi • 1"–½" —Check and shut-off in one complete assembly. Low pressure drop. Ideal for station outlet and pipeline.

Pneumatic Electric • 150 psi • 1" —Efficiency independent of differential pressure. Operable from remote control by system fluid or externally. Solenoid pilot optional.

Send today for information on these all-new valves.

AIRCO®
Industrial distributor and dealer inquiries invited
AIR REDUCTION SALES COMPANY
Equipment Manufacturing Plant,
Dept. BV, Clermont Terrace, Union, N. J.

▲ For more details circle NED-523 F8 on enclosed inquiry slip ▲

WE STRAP IT
coming and going

Regardless of how they're stacked, where they're going, or what they'll be used for, materials like these palletized springs can be safely and securely tied with USS GERRARD* Steel Strapping. If you'd like more information on how USS* GERRARD Steel Strapping can solve your packaging-tying problems, send for our free 36-page Blue Book of Packaging, *today*. Gerrard Steel Strapping, 4717 South Richmond Street, Chicago 32, Illinois.

Gerrard Steel Strapping Dept.
U. S. Steel Supply
Division of
United States Steel
USS *TRADEMARK

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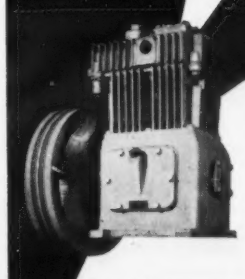
LUBRICATION



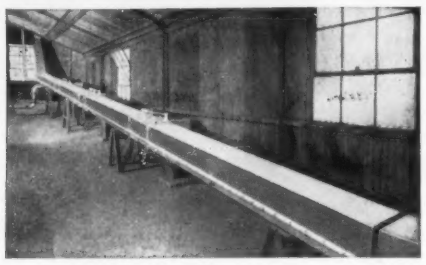
Something LESS
for you to think
about with a
Quincy
COMPRESSOR

Let oil pressure fall too low for *any* reason and the Quincy Compressor with Safe-Q-Lube unloads automatically, warning the user. The same system that guards the bearings prolongs motor and belt life, too, by providing loadless starting and free-rolling stops. Authorized parts and service depots from coast to coast.

SEND FOR CATALOG

Quincy COMPRESSORS
QUINCY COMPRESSOR CO.
DEPT. NED-658, QUINCY, ILL.

▲ For more details circle NED-525 F8 on enclosed inquiry slip ▲



F-H AIRSLIDE® . . . the conveyor with no moving parts

The F-H Airslide fluidizing conveyor is a revolutionary type of conveyor, using low-pressure air, and gravity, in which fine dry materials flow like water.

There are many reasons for the universal acceptance of this conveyor. Simplicity of construction and installation. Comparatively light in weight, it can be suspended from overhead or placed on the floor. No moving or working parts, maintenance is nil. Nothing moves but the material and air. Benefits are constant and substantial.

For complete information, write for Bulletin FH-2B.

FULLER COMPANY 3757 FH-54
154 Bridge St., Catasauqua, Pa.
SUBSIDIARY OF GENERAL AMERICAN TRANSPORTATION CORPORATION
Birmingham • Chicago • Kansas City • Los Angeles • San Francisco • Seattle

▲ For more details circle **NED-527 F8** on enclosed inquiry slip ▲

SAVE STORAGE SPACE

SAVE HANDLING TIME

Brown Sectional Stock Racks store more stock in less space. Handling is reduced to a short lateral movement instead of a long laborious end-haul.

Brown Racks are unique in both flexibility and economy. Spaced as required they can be easily relocated . . . they are neither cross-braced nor floor-bolted. Accessories, including base brackets and trays, increase usefulness.

Brown Racks are quickly installed, all components are slip-fitted together. No bolting, no tools.

WRITE TODAY for complete information on how low-cost Brown Stock Racks can help solve your storage problems. Brown Engineering Company, 129 No. 3rd Street, Reading, Pennsylvania.

BROWN *Flexible* **STOCK RACKS**

▲ For more details circle **NED-528 F8** on enclosed inquiry slip ▲

Veelos Knocks Out Belt Vibration... Up To 90%!

HERE'S PROOF! With an electronic vibration analyzer, your Manheim Veelos representative can measure the exact vibration in your machines. This test is absolutely free and is offered as conclusive proof that Veelos Adjustable V-Belts are better for your drives.

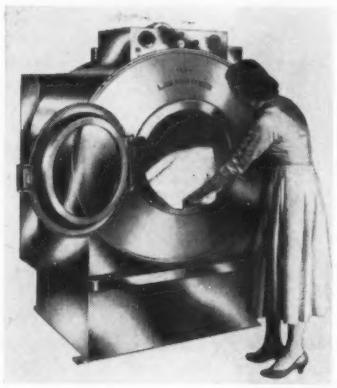
TEST YOUR BELTS! Test Veelos belts against the V-belts you're now using—convince yourself, in this 15 minute test, that Veelos cuts V-belt vibration up to 90%. Smooth running Veelos saves you money by cutting down bearing wear, work spoilage, etc.

Write for free Vibration Demonstration or Free Veelos Data Book to:

MANHEIM
MANUFACTURING & BELTING CO.
605 Stiegel St., Manheim, Penna.

▲ For more details circle **NED-529 F8** on enclosed inquiry slip ▲

AUTOMATIC WASHING MACHINES for wiping rags, filters, uniforms



Built for continuous, heavy duty use, Laundrite automatic industrial washing machines are suited for in-plant washing of wiping rags, gloves, smocks, uniforms, filter cloths, and other objects. Operation is normally automatic, but can be made manual by use of a built-in hold switch. Automatic water inlet, level, temperature, and outlet controls and V-belt drive are mechanical features. Cylinders and cabinets are stainless steel. Available dryweight capacities are 25, 40, 60, 85, and 110 lb. The 110-lb capacity unit is shown. Made by **American Machine & Metals, Inc.**, Troy Laundry Machinery Div., Dept. NE1, East Moline, Ill.

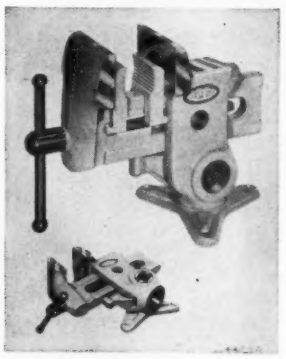
▲ For more details circle **NED-530 F8** on enclosed inquiry slip ▲

HAT & COAT CHECKER for do-it-yourself checking

Metal disc that is numbered and keyed to fit only one hanger serves as the check for this simple "check-it-yourself" device for hats and coats. A plunger arm of the all-metal hanger holds a hat and/or coat securely and locks automatically. Check can be removed only when the unit is locked. Any number of hangers can be hung on walls, swinging brackets, or rows of racks. Made by **Backus Novelty Co.**, 600 Water St., Smethport, Pa.

▲ For more details circle **NED-531 F8** on enclosed inquiry slip ▲

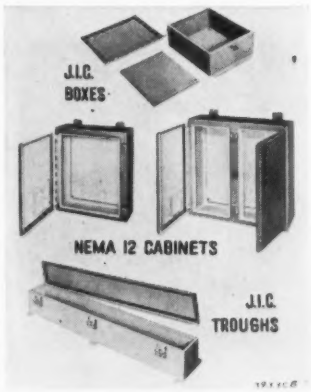
MULTI-PURPOSE VISE has smooth and serrated jaws



Improved Versa-Vise has been strengthened at points of strain and is offered with removable serrated jaws and broad, smooth jaws for performing various types of work. Vise turns 360 degrees around its base in either of two positions, standing or on its side as shown. It is locked in any position by tightening the jaw handle. Price in east is $13.95. Made by **Will-Burt Co.**, Dept. 522, Orrville, Ohio.

▲ For more details circle **NED-532 F8** on enclosed inquiry slip ▲

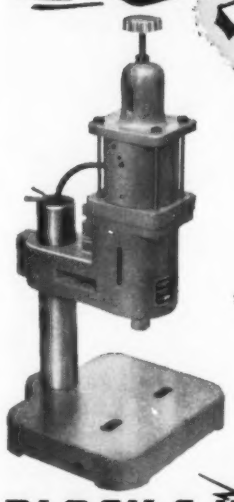
ELECTRICAL BOXES & CABINETS conform to JIC and NEMA specs



Line of JIC electrical pull boxes, troughs, and NEMA 12 cabinets is designed without holes or knockouts for use where protection is needed against liquids, fumes, and dirt. Eight sizes of wiring boxes range from 4 x 4 x 3 in. to 16 x 14 x 6 in. They are designed for use as terminal wiring boxes and instrument enclosures. Seams are welded and cover has cellular neoprene gasket. Troughs in 2½ and 4-in. depths range in size from 2½ x 12 in. to 4 x 72. Chained cover also has neoprene gasket. The cabinets are engineered for use in explosive, flammable, or dust-laden surroundings, and have welded seams and gasketed doors. Made by **Huenefeld Co.**, 2703 Spring Grove Ave., Cincinnati 25, Ohio.

▲ For more details circle **NED-533 F8** on enclosed inquiry slip ▲

KNOCKOUT HIGH PRODUCTION COSTS with ELECTRO PUNCH



Lightning fast controlled impacts up to 10,000 lbs. . . . yet can be adjusted precisely enough to tap an egg *without breaking the shell.* Your guarantee of flawless production at speeds up to 120 blows a minute.

MARK • STAKE • SWAGE • BEND
CUT-OFF • RIVET • PUNCH

Write for free folder showing complete line of Black & Webster solenoid-operated production tools.

BLACK & WEBSTER, INC.
Dept. 1, 445 Watertown Street, Newton 58, Mass.
SOLENOID-OPERATED PRODUCTION TOOLS

▲ For more details circle **NED-534 F8** on enclosed inquiry slip ▲

FOR THOSE HARD - TO - REACH TURNINGS NYE CHAIN WRENCH

SAVES TIME • EASES WORK

Perfect for work against walls, in corners, on parallel pipes. Needs less than ⅝" clearance. Takes positive grip. Solidly built. Forged alloy handle. Saves a lot of time on the job. Order today.

TURNS ANY SHAPE
Round, square, hexagonal or octagonal, bars, pipe, conduit. No crushing.

Ratchet action takes each new bite without removing wrench from work.

NYE TOOL COMPANY
4126 WEST FULLERTON AVE., CHICAGO 39, ILLINOIS

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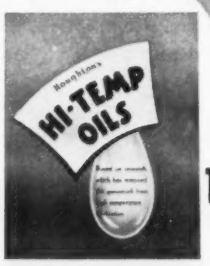
clean lubrication



300°F to 1,000°F

FOR 300°F. UP: Three types of Hi-Temp oils cover temperatures up to 1,000°F. Here's clean, dependable lubrication that keeps wear to a minimum under the most difficult high temperature conditions. No carbon build-up. No bearing seizure. Get new bulletin by writing E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa.

HI-TEMP OILS
. . . products of

E. F. HOUGHTON & CO.
PHILADELPHIA • CHICAGO • DETROIT • SAN FRANCISCO

Ready to give you on-the-job service . . .

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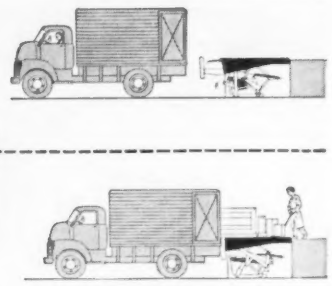
NEW Automatic DOCK RAMP



Truck actuated . . . needs no counterweight

- Completely mechanical operation, powered by truck backing against ramp bumpers.
- Controlled tension spring assembly provides smooth operation and eliminates need for expensive counterweight.
- Positions automatically . . . has five other completely automatic features including cross traffic safety lock and self-aligning bumper.
- Low in cost and easily installed . . . recessed and front-of-dock models.

Rotary AUTOMATIC DOCK RAMP

GET FACTS TODAY

TEAR OUT this page, clip to letterhead and mail to

ROTARY LIFT CO.
Division of Dover Corporation
1169 Kentucky, Memphis 2, Tenn.

▲ For more details circle NED-537 F8 on enclosed inquiry slip ▲

REDUCE HOT WATER GENERATION COSTS IN YOUR PLANT

INSTALL A.O.Smith **Burkay** HIGH RECOVERY GAS-FIRED WATER HEATERS

Significant cost reduction in the heating of hot water for many plant needs can be made with the **Burkay** System of Water Heating.

With **Burkays** you can cut back the operation of your expensive boilers, or in some cases dispense with them entirely . . . thereby reducing overhead, labor and maintenance costs. High recovery **Burkay** units give you **more hot water** at the **right temperature** for **less money** in less time!

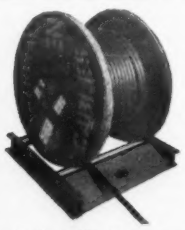
WRITE FOR COMPLETE INFORMATION

Through research . . . a better way

A.O.Smith CORPORATION
Permaglas Division, Dept. NED-658
Kankakee, Illinois

▲ For more details circle NED-538 F8 on enclosed inquiry slip ▲

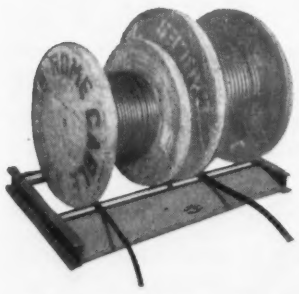
LOAD 'EM . . . LET 'EM ROLL HANDLE REELS THE EASY WAY!



Easy, simple, efficient, time and labor-saving. Just load cable, wire or rope reels on Roll-A-Reel and let 'em roll on the ball-bearing adjustable rollers, on heavy steel frame.

Style "A" 2,000 lbs. cap. for reels up to 28 in. wide. (weight 60#)

PRICE — $46.50
F. O. B. Cincinnati



- ★ No jacks
- ★ Handle any reel diameter
- ★ Heavy steel frame
- ★ Slanted front
- ★ Ball-bearing adjustable rollers
- ★ Positive roller lock for unloading

Style "B" 4,000 lbs. cap. for 2 reels up to 24 in. wide each, or 1 reel up to 48 in. wide. (weight 110#)

PRICE — $84.50
F. O. B. Cincinnati

(Special sizes quoted on request)
Order today...or write for details

ROLL•A•REEL

4630 Reading Road
Cincinnati 29, Ohio

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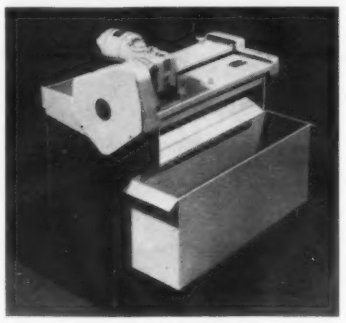
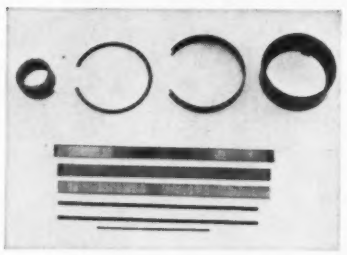
MAGNETIC COOLANT SEPARATORS
25, 50, 75, and 100 gpm capacities



Power - Grip magnetic coolant separators, made in 25, 50, 75, and 100-gpm capacities, can be installed on many grinding, honing, and gear - shaving machines. Usually, they can be placed directly on top of an open coolant tank. Coolant leaving the machine passes under Alnico magnet drum revolving against the flow. Separated material is removed from drum by scraper. Separators are offered in one, two, three, and four drum types. Single drum unit is powered by a 1/50-hp motor, while the three larger sizes are powered by a 1/20-hp motor. The 25-gpm unit plugs into 110 v, whereas the 50, 75, and 100-gpm separators operate on 220 or 440 v ac. Made by **Sundstrand Machine Tool Co.**, 2574 11th St., Rockford, Ill.

▲ For more details circle NED-540 F8 on enclosed inquiry slip ▲

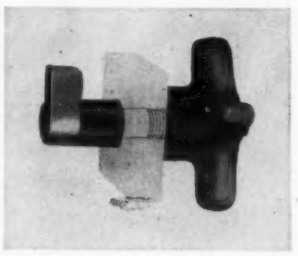
WIRE WOUND WINDINGS
custom made to specifications



Precision wire wound windings for potentiometers, resistors, rheostats, voltage dividers, or slide wires are produced to specifications by this company. They include varnish or other adhesive coatings and cleaning operations as required. Resistance values range from 50 ohms to 750 kilohms using standard resistance wires, or up to 1.6 megohms with precision metal wires, on a typical 5/16 x 4½-in. card. Mandrels may be flat phenolic cards in most sizes, with milled edges, made to specification. Round copper, enamel coated, straight, or coiled types are offered. Bare or enameled winding diameters can be as small as 0.0004 in. Stabilization is offered where required. Resistor strips can be incorporated in specified equipment. Made by **Brys Instrument Co.**, Dept. NED, 7026 Sixth Ave., Brooklyn 9, N. Y.

▲ For more details circle NED-541 F8 on enclosed inquiry slip ▲

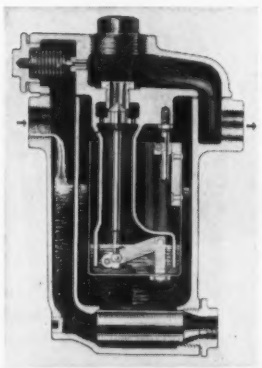
FIXTURE CLAMP
controlled from outside of fixture



This Wespo L - lock clamp is especially designed for jig and fixture work. It is controlled by wing knob which is outside the fixture, and it holds work securely on the inside. Made by **West Point Mfg. Co.**, 26943 W. Seven Mile Rd., Detroit 19, Mich.

▲ For more details circle NED-542 F8 on enclosed inquiry slip ▲

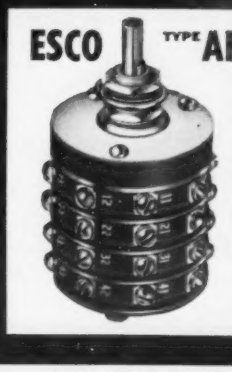
STEAM TRAPS
for 0 to 150 psi



Open float and thermostatic type 500-C Series steam traps have provisions for fast warm up and efficient handling of entrainment in every stage from cold start to saturation temperatures. They can be used for pressures varying from 0 to 150 psi. They discharge at 1 and 2° F below saturation temperatures, thereby keeping equipment hot after the initial warm-up cycle. Internal operating mechanism, including the bucket and linkage, is attached to the removable cover. Working parts are either Monel or stainless steel. Condensate entering the traps passes through a built-in Monel strainer with 0.033-in. perforations. Series includes six models for ½ to 2-in. pipe sizes. Prices range from $14 to $100. Made by **Wright-Austin Co.**, 3247 Wight St., Detroit 7, Mich.

▲ For more details circle NED-543 F8 on enclosed inquiry slip ▲

rotary multipole switch



meets Specification MIL-S-6807

- *8 contact positions.*
- *Up to 6 sections, or poles.*
- *Unlimited or limited rotor movement by moving two stop screws.*
- *Electrical ratings: 5 amp. 28 v. d-c, resistive. 2.5 amp. 28 v. d-c, inductive. 2.0 amp. 28 v. d-c, lamp load. 5.0 amp. 115 v. 400 cps, resistive. 2.0 amp. at 50% power factor.*

The ESCO Type AF rotary multipole tap switch is designed to meet Specification MIL-S-6807. Rotor movement can be changed from unlimited to limited (2 to 8 positions) by placement of two stop screws in the rear plate.

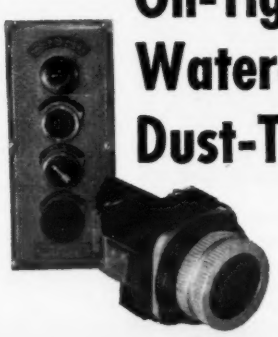
Write today for Bulletin 7.

ESCO of WEYMOUTH
ELECTRO SWITCH CORPORATION
Weymouth 88, Massachusetts

▲ For more details circle NED-544 F8 on enclosed inquiry slip ▲

Extra Rugged Extra Reliable

Oil-Tight Water-Tight Dust-Tight



THE NAMCO GOLD N RING SEALTIGHT

Control Station Switches

Here are the switches that give extra service because they are designed by a machine tool designer and built as machine tools are built.

- **Heavy duty silver alloy contact points**
- **Heavy duty terminal screws**
- **Superior dielectric characteristics**
- **Easy to install**

FREE BOOKLET AVAILABLE

Write for your free copy of Bulletin ECS-56. It will show you how to get more for your Control Switch dollar. Better still, ask us to have one of our representatives call.

Electrical Manufacturing Division

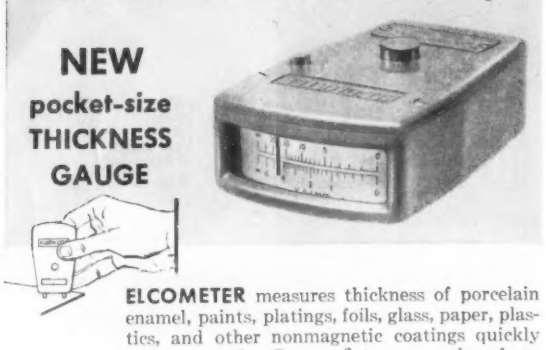
National Acme

The National Acme Company, 182 E. 131st St., Cleveland 8, Ohio

▲ For more details circle NED-545 F8 on enclosed inquiry slip ▲

Measures Nonmagnetic Coatings with ± 5% ± .0001" accuracy

NEW pocket-size THICKNESS GAUGE



ELCOMETER measures thickness of porcelain enamel, paints, platings, foils, glass, paper, plastics, and other nonmagnetic coatings quickly and accurately. Gauges flat or curved surfaces and hard-to-get-at spots easily. Needle locking device assures correct reading every time. Complete with tough leather case containing inner pocket for test strips. Weighs only 6 oz. Completely self-contained.

FREE TRIAL. Ask your purchasing agent to order an Elcometer on trial basis. Retail price, F.O.B. Cleveland **ONLY $75.00**

FERRO **FERRO CORPORATION**
4151 East 56th Street • Cleveland 5, Ohio

For more details circle NED-546 F8 on enclosed inquiry slip

UNIQUE AIR CYLINDER

CUTS COSTS
NO EXTRA VALVES TO BUY

4-way directional valve, and two-way speed control valves are built-in features of this different air cylinder. *No extra valves to buy.* It's a complete packaged air-power unit. You can have your choice of six built-in valve arrangements. Five bore sizes. Any stroke length.

FREE 4-Color Bulletin gives details

Write Dept. NED 658, The Bellows Co., Akron 9, Ohio. In Canada: Bellows Pneumatic Devices of Canada, Ltd., Toronto 18. Ask for Bulletin BM-25.

1011-B

The Bellows Co.
OF CALIFORNIA
926 Western Ave. Glendale 1, Calif.

For more details circle NED-547 F8 on enclosed inquiry slip

CFC Honan-Crane filter

meets JIC Specifications

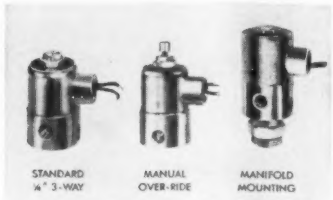
The CFC Honan-Crane K-Type Filter for hydraulic fluids, fuels and mineral oils employs two types of interchangeable cartridges. New Flo-Pac resin-impregnated pleated paper cartridge filters out 98% of all particles over 5 microns, in one pass. It will not remove additives. New K-Type Cartridge was developed specifically to best meet JIC hydraulic standards. It contains Cranite (fuller's earth) to remove water, acids and asphaltenes as well as solid contaminants.

Write for literature to Department NE

COMMERCIAL FILTERS CORPORATION
MELROSE 76, MASSACHUSETTS
PLANTS IN MELROSE, MASSACHUSETTS AND LEBANON, INDIANA

For more details circle NED-548 F8 on enclosed inquiry slip

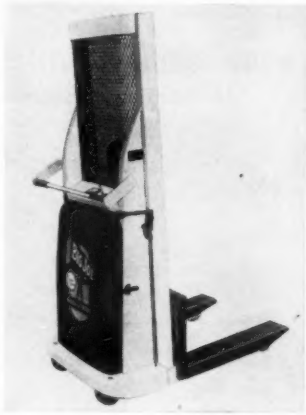
SOLENOID VALVES
for operation up to 200 psi



Coils of these 1/8 and 3/16-in. orifice solenoid valves are sealed from air, oil, gas, and water and will not overheat on continuous duty. The same coil is used for continuous or intermittent duty and alternating or direct current. Designed for operation in ranges up to 200 psi, they have 1/8 and 3/16-in. passages throughout and are rated at 2 to 35 cfm at 0 to 200 psi. Standard construction includes pipe exhaust and conduit connection. Adjustable exhaust flow control and manual over-ride are available. Valves can be bottom-drilled for manifolding or tapped for standard connection. Made by **Airmatic Valve, Inc.**, 7317-A Associate Ave., Cleveland 9, Ohio.

For more details circle NED-549 F8 on enclosed inquiry slip

1000-LB LIFT TRUCK
is low-cost battery-operated unit



Specifically designed for handling appliances, boxes, barrels, drums, and other loads weighing up to 1000 lb, this 299 hydraulic fork and platform lift truck is 12-v battery-operated. Equipped with safety controls, it raises loads to a height of 57 in. Other models with 67, 77, and 87-in. lifting heights are available. Self-contained battery charger assures full utilization. Price is $299. Made by **Big Joe Mfg. Co.**, Industrial Road, Wisconsin Dells 1, Wis.

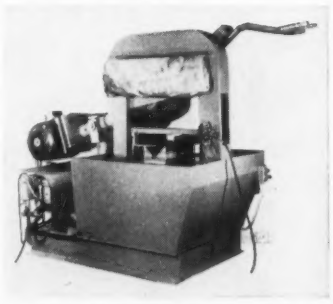
For more details circle NED-550 F8 on enclosed inquiry slip

INDICATOR LAMP
for transistor circuits

This low current GE-344 incandescent indicator lamp can be used in transistor circuits and burns brightly enough to be seen under 100 ft-c of surrounding illumination. Rated 10 v, 15 ma, it has a life in excess of 5000 hours. Bulb diameter is only 7/32 in. Lamp has a single contact midget flange base. Made by **General Electric Co.**, Dept. 166-NED, Nela Park, Cleveland 12, Ohio.

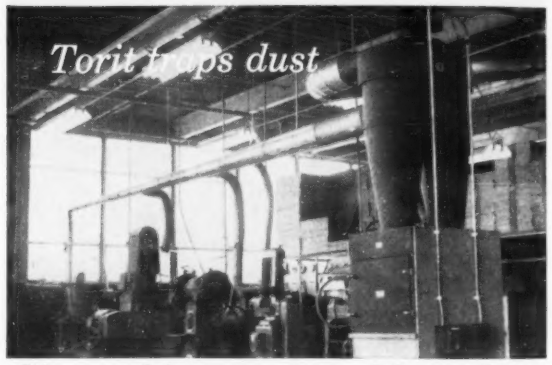
For more details circle NED-551 F8 on enclosed inquiry slip

ABRASIVE CUTTING MACHINE
cuts 4-in. square bar in 1 min



Powered by three separate motors, the See - Saw abrasive cutting machine can travel over a prescribed distance steadily, or intermittently at any desired frequency of reciprocation. Forward and backward movement is not restricted to a limited arc. One motor rotates cutting wheel, the second powers the forward and back travel of cutting head, and the third motor, controlled by a pushbutton, supplies cutting compound to cutting area. Cutting is performed anywhere in a 9 x 18-in. area. Machine will cut 3 x 18-in. plate, 18-in. channel, 8-in. pipe or round bar, 8-in. square bar, or 8 x 8 x 1-in. angles. Wet rubber-bonded or dry resinoid-bonded wheels can be used. Made by **Wallace Supplies Mfg. Co.**, Dept. NED, 1304 Diversey Parkway, Chicago 14, Ill.

For more details circle NED-552 F8 on enclosed inquiry slip



Six machines protected from dust by Torit for **$666.15**

This Torit Dust Collector, Model 219FM, complete with accessories, was installed by the Mohr Lino Saw Co., Skokie, Ill., to protect 3 belt sanders and 3 other grinders (2 grinders hidden from view) from destructive dust—at a total cost of just $666.15!

After one year's operation, Mohr Lino Saw says this about their *low-cost* Torit installation: "The Torit installation has kept our shop *cleaner*, our operators *happy*, and *protected vital* machinery."

You too can achieve greater machine protection and cleaner working conditions by trapping dangerous or valuable dust *at its source* with a completely *self contained* and *portable* Torit Dust Collector. For full details write to:

TORIT MANUFACTURING CO.
Dept. 203; 311 Walnut Street, St. Paul 2, Minn.

For more details circle NED-553 F8 on enclosed inquiry slip

WHERE HIGH HEAT CONCENTRATION IS IMPORTANT . . . SPECIFY

WATLOW'S FIREROD CARTRIDGE HEATER

offers you ***5 times more heat*** *. . . in the same space!*

FREE BULLETIN
Operation data, tests, performance charts, etc. Yours on request.

- New high in watts densities and temperatures!
- L-o-n-g-e-r cartridge life!
- New design flexibility — the same heat as a standard cartridge heater in a unit 1/5th the size!

WATLOW
ELECTRIC MANUFACTURING CO.
1374 Ferguson Avenue
Saint Louis 14, Missouri

For more details circle NED-554 F8 on enclosed inquiry slip

FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL TOOL BOXES
CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition

Write for FREE book, including complete information.

Waterloo
VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

For more details circle NED-555 F8 on enclosed inquiry slip

Laminates by Richardson offer greater machine design opportunities

PROPERTIES: Plastic laminates (paper or fabric based phenolics or melamines) are about one-fifth the weight of steel yet are very strong, durable, resilient, highly dielectric, non-hygroscopic, machineable, and resistant to mild acids, oils, greases and other common liquids.

USES: Plastic laminates can be machined easily to close tolerances on wood or metal working machinery. Some grades make excellent bearing material. Accurate machining produces gears of great strength and hundreds of other parts to replace wood, metal, glass or other materials with lesser properties for the application.

FORMS: Richardson laminates are available in sheets, rods, and tubes, each in many grades, sizes, thicknesses and finishes.

Write to Dept. 36 for Laminate Catalog

the RICHARDSON COMPANY

2798 Lake Street, Melrose Park, Ill. • Chicago Phone: MAnsfield 6-8900

▲ For more details circle NED-556 F8 on enclosed inquiry slip ▲

ONLY

CAPEWELL

BAND SAWS

are CRAVENIZED*

for

- Strongest Tooth Structure
- Freedom from Gullet Cracking
- Maintained Cutting Edge
- Longest Life

***Cravenizing:** A process, exclusive with Capewell, which controls the depth of hardness of the cutting edge, blending it into the back. The result is a saw with extra tough teeth on a flexible blade.

5 TYPES FOR EVERY PURPOSE

Contour
Cutoff
Skip Tooth
Shark Tooth
Friction

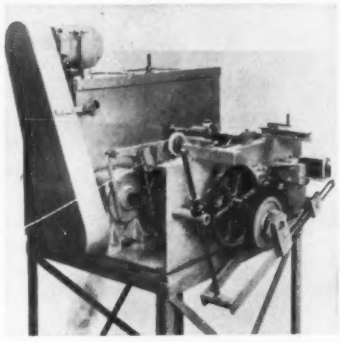
See Your Capewell Distributor

CAPEWELL

THE CAPEWELL MFG. CO.
HARTFORD 2, CONN.

▲ For more details circle NED-557 F8 on enclosed inquiry slip ▲

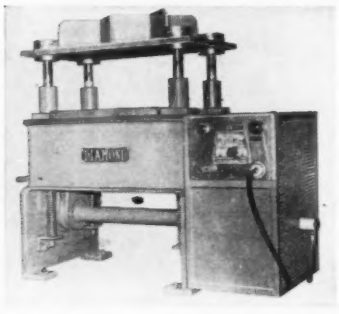
WIRE CUTTER & STRIPPER will cut over 9000 pieces per hour



Over 9000 pieces 1 to 40 in. long can be cut per hour by this Acme automatic wire cutter and stripper which pushes, rather than pulls wire through. On lengths from 80 to 120 in., output up to 3000 pieces per hour is possible. Gear train assures close tolerance of over-all lengths. Strip length can be adjusted from 1/8 to 1 in. on each end. A 2-in. strip can be produced on one end. Grip adjusts itself for wide range of wire sizes and practically any type of insulation. Model 12 cuts 1 to 80-in. lengths; heavy duty Model 12X handles lengths through 120 in.; and Model 10, lengths through 120 in. Last model has synchronized power prefeeder for heavy reels and long lengths. Made by **Jennings Machine Corp.**, Dept. NA, 3452 Ludlow St., Philadelphia 4, Pa.

▲ For more details circle NED-558 F8 on enclosed inquiry slip ▲

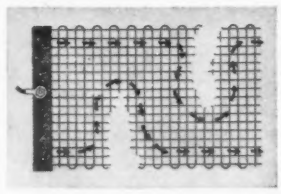
FOUR-POST PUNCH PRESS 20-ton unit fed from four sides



Accessibility for manual or automatic feeding from any or all four sides adapts this four-post Multi - Max punch press to assembly line work, or as an integral station in an automatic stamping line. Standard roll or hitch feeds as well as progressive or transfer fingers can be connected to the press. Electrical controls are for single stroke, continuous running, inching, and jogging. A half stroke is also possible. Model shown has 1½-in. stroke, 10-in. die shut height, 2-in. ram adjustment, 20 x 24-in. bed and ram size, counterbalanced ram, and 3-hp motor. Speeds up to 750 strokes per minute are available, depending on stroke. Made by **Diamond Machine Tool Corp.**, 5111 Coffman-Pico Rd., Pico, Calif.

▲ For more details circle NED-559 F8 on enclosed inquiry slip ▲

WIRE MESH HEATING ELEMENT assures even surface temperature, and operates even though damaged



Heart of this wire mesh surface heating element is made up of 36 wires per inch of heater width in parallel circuit, providing a heat source every 0.028 in. In addition, another continuous strand wire is looped and interwoven 30 times per inch running perpendicular to the current flow. Thus, if mesh is damaged, current flow is distributed from one or more of the parallel circuit wires around the damaged area.

Basic fine wire mesh is interwoven with heat resistant glass or ceramic fibers for strength. Available forms include a detachable form-fitting unit, heaters bonded to the part, blanket heaters, and flexible types encased in rubber tape or sheeting. Only 0.012 in. thick, heater operates on 6 v dc to 220 v ac. Made by **Electrofilm, Inc.**, Dept. LBP-6, Box 106, North Hollywood, Calif.

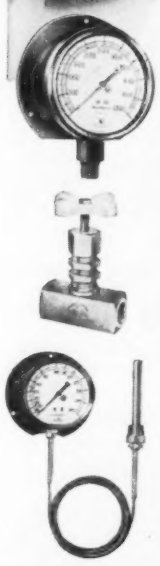
▲ For more details circle NED-560 F8 on enclosed inquiry slip ▲

Heating, Ventilating & Air Conditioning

More than 1270 pages of technical data and 500 pages of catalog information are contained in the "1958 Heating Ventilating Air Conditioning Guide." Fourteen new chapters have been added, dealing with the latest equipment, practices, codes, and standards. This handbook is carefully indexed for convenient reference to the technical and equipment sections. Included is a 24 x 32-in. psychrometric chart in a pocket in the back cover. Authoritative data were compiled by experts in all fields. Price is $12. Published by American Society of Heating & Air-Conditioning Engineers, 62 Worth St., New York 13, N. Y.

▲ For more details circle NED-561 F8 on enclosed inquiry slip ▲

First choice of the rocket and missile industry...



Three superlative Marsh products are widely used and approved by the aircraft and missile industry:

MARSH Pressure Gauges...
because they combine the most advanced features ever found in pressure, vacuum and compound gauges. There is a Marsh Gauge for every conceivable application.

MARSH Needle Throttling Valves...
because they are guaranteed to give micrometer regulation at HIGH pressures—pressure up to 10,000 psi—and any temperature up to 500° F.

MARSH Dial Thermometers...
because they offer the precision and accuracy a precision industry demands. Most complete line; wide temperature ranges, dial sizes, patterns, finishes.

All Marsh products available with AND threads

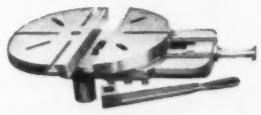
MARSH *New catalog covers all details*

MARSH INSTRUMENT CO. *Sales Affiliate of Jas. P. Marsh Corp.* **Dept. 26, Skokie, Ill.**
Marsh Instrument & Valve Co., (Canada) Ltd., 8407 103rd St., Edmonton, Alberta, Canada. Houston Branch Plant, 1121 Rothwell St., Sect. 15, Houston, Texas

▲ For more details circle NED-562 F8 on enclosed inquiry slip ▲

It's OK Boys

I use the Modern Safety Drill Table for all sorts of jobs. No more bother with clamps, V-blocks, parallels. Instead of spending 20 minutes to make a tough set-up, I just drop in the work and am ready to drill in a couple minutes. I save a lot of time. In fact, the company guarantees that this combination drill table and vise will save its cost on labor alone in six months in your shop.



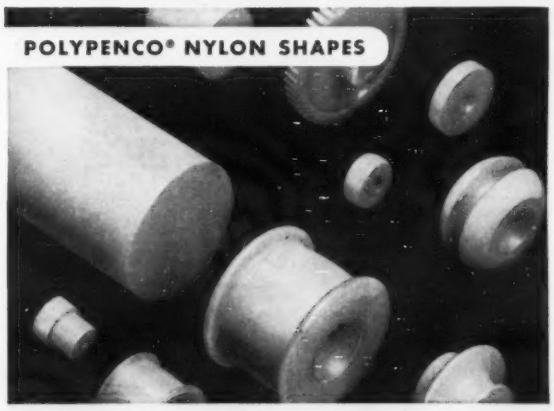
FREE TRIAL OFFER

Try it for 30 days at our expense. Write for illustrated literature and full details.

MODERN MACHINE TOOL CO.
2005 LOSEY AVENUE
Jackson, Michigan

▲ For more details circle NED-563 F8 on enclosed inquiry slip ▲

POLYPENCO® NYLON SHAPES



Nylon maintenance parts out-perform parts they replace

Tough, long-wearing nylon parts, machined rapidly and accurately from Polypenco nylon stock shapes are providing these definite advantages in more and more maintenance applications:

- *Wear resistance*
- *Resiliency*
- *High strength/weight ratio*
- *Low coefficient of friction*
- *Chemical resistance*
- *Noise dampening*
- *Good electrical insulation*
- *Abrasion resistance and non-galling*

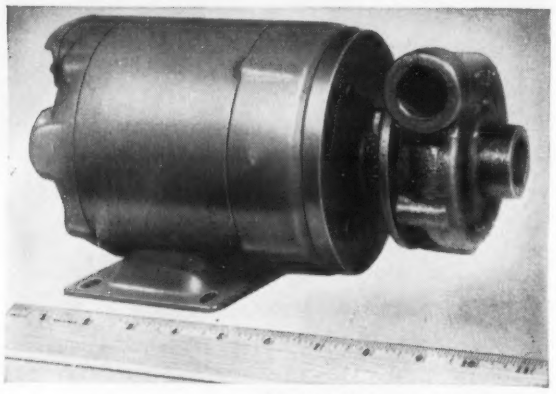
Polypenco nylon shapes—which include rod, bar, tubular bar, strip and plate—are available for immediate delivery from warehouses located throughout the country. Polymer also maintains a custom fabricating service to produce parts. Write today for data on products and services.

THE POLYMER CORPORATION OF PENNA.
Reading, Penna.
Export: Polypenco, Inc., Reading, Penna., U.S.A.

POLYPENCO

POLYPENCO nylon, POLYPENCO Teflon†, NYLAFLOW® and NYLATRON® GS
† DU PONT TRADEMARK

▲ For more details circle NED-564 F8 on enclosed inquiry slip ▲



Goulds Fig. 3604 chemical circulating pump

A small pump with big-pump stamina

Here's a compact pump you can use to save space in chemical equipment. It offers advantages in size, weight, cost, and dependable performance.

Size—10½" x 5½" x 5½", small enough to fit tight locations.

Weight—23 lbs. with motor, easily portable in lab or pilot plant.

Performance—dependable heavy duty service round the clock, round the calendar.

Available from stock in 316 stainless steel for corrosive service. Designed for temperatures to 220° F. and working pressures to 75 p.s.i. Capacities to 16 GPM and heads to 28 ft.

For details, ask your Goulds dealer for Bulletin 624A4, or write

GOULDS PUMPS, Inc., Seneca Falls, N.Y.

▲ For more details circle NED-565 F8 on enclosed inquiry slip ▲

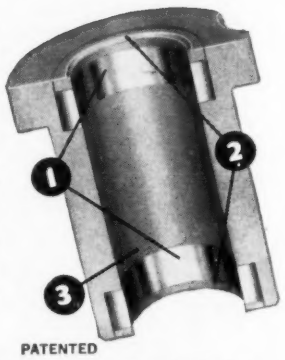
MEYCO CARBIDE INSERTED DRILL JIG BUSHINGS PROVE THEMSELVES

IN Automation!

The reason is simple: these unique bushings are ideally suited for long-running, uninterrupted operations!

MEYCO carbide inserted bushings assure long life for drills, jigs, fixtures . . . accurate work maintained, resulting in less down-time, fewer lost man-hours. Last almost as long as solid carbide bushings, cost slightly more than ordinary bushings. Get the full story:

Write for information and price list, ask for Catalog No. 29.



PATENTED

1. Tungsten carbide rings at the points of wear; 2. Steel rings protect drills and carbide; 3. Special hardened alloy steel body.

EST. 1888

W. F. MEYERS CO., INC., BEDFORD, INDIANA

▲ For more details circle NED-566 F8 on enclosed inquiry slip ▲

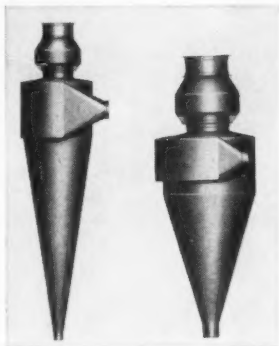
over bending problems? Your solution may be "multiple bending" of pipe, tube or structural metal parts on PEDRICK PRODUCTION BENDERS. Let us show you. Write PEDRICK TOOL AND MACHINE CO., 3640 N. Lawrence St., Philadelphia 40, Pa. Dept. 6.

PEDRICK PRODUCTION BENDERS

Free "Pedrick Line" Bulletin. Write today.

▲ For more details circle NED-567 F8 on enclosed inquiry slip ▲

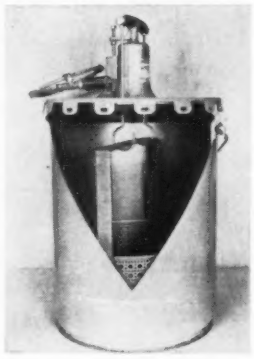
CENTRIFUGAL DUST COLLECTORS
handle 44 to 5 micron size dust



A total of 41 sizes is made available by Design 3 and Design 5 centrifugal dust collectors comprising the Series C line. The Design 3 collector is intended for shavings, sawdust, or buffing dust which runs above 325 mesh, or 44 microns in size, but may contain small amounts down to 20 microns. At normal rating, this collector operates at 2 in. water column S.P. Capacities range from 350 to 54,500 cfm. Smaller diameter, long cone Design 5 collector is a high centrifugal force unit designed for coal, foundry, flour, and cement dust ranging down to 5 to 10 microns. Capacities range from 260 to 6500 cfm. This unit is rated at 4 in. water column S.P. at standard air density. Made by **Kirk & Blum Mfg. Co.**, 3100 Forrer St., Cincinnati 9, Ohio.

▲ For more details circle NED-568 F8 on enclosed inquiry slip ▲

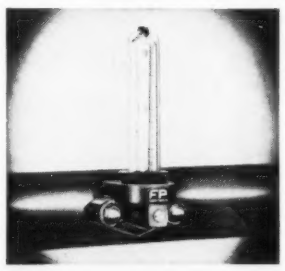
AIR-POWERED PARTS CLEANER
agitates parts basket in solution



This bench type, Mini-Dip, air - powered parts cleaner fits the top of any standard 5, 6, or 15-gal open head container. With built-in air motor connected to air supply, unit automatically agitates parts basket up and down 100 times a minute through cleaning solution. Cleaner handles up to 50 lb of parts at a time. Typical automotive use is cleaning of carburetors, fuel pumps, pistons, and valves. Kit being offered comprises the Mini-Dip, a round dipping basket, and a 6-gal pail. Made by **Magnus Chemical Co.**, Equipment Div., Dept. NED, South Avenue, Garwood, N. J.

▲ For more details circle NED-569 F8 on enclosed inquiry slip ▲

INDICATING FLOWMETER
measures flow in either direction

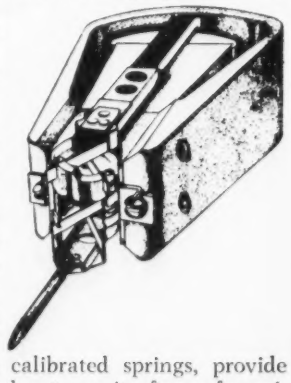


Easily installed without flanges or matching orifice plates, the Mighty-I indicating flowmeter measures flow in either direction in any pipe size from 1½ to 8 in. No additional components are required. It is suitable for flow ranges up to 10 to 1. Readings are made directly by means of a ball float and linear scales calibrated for 3-30 and 200-2000-gpm rates. Made by **Fischer & Porter Co.**, 677 Jacksonville Rd., Hatboro, Pa.

▲ For more details circle NED-570 F8 on enclosed inquiry slip ▲

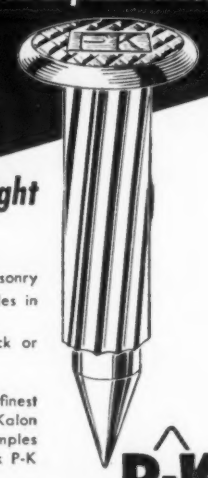
MOVING COIL MECHANISM
improves flight instrument function

A gravity compensated flexure pivot bearing system is embodied in this moving coil mechanism designed to improve instrument operation in high performance aircraft. Mechanism achieves a reduction of acceleration influence, eliminates bearing friction and wobble, and minimizes mechanical resonance in pointer display members. Gravity - compensated flexure pivot provides a frictionless bearing, allowing infinite resolution without axial or radial play. Pivot members of Elgiloy, arranged in pairs, serve as calibrated springs, provide restoring torque, and cancel out gravity forces for orientation of the moving coil system. Made by **Marion Electrical Instrument Co.**, Dept. N, Grenier Field, Manchester, N. H.



▲ For more details circle NED-571 F8 on enclosed inquiry slip ▲

P-K hardened Masonry Nails do the work of plugs and expansion bolts . . . at a fraction of the cost!



Built to drive straight and stay tight

- No pilot holes needed in soft masonry
- Drive easily into pre-drilled holes in harder materials
- Won't loosen—even under shock or vibration

IF IT'S P-K . . . IT'S O.K. For the finest fasteners made, insist on Parker-Kalon . . . the name you can trust. Get samples from leading distributors who stock P-K Masonry Nails . . . or write:

P-K TRADE MARK REG. U.S. PAT. OFF.

PARKER-KALON fasteners

Parker-Kalon Division • General American Transportation Corporation • Clifton, New Jersey

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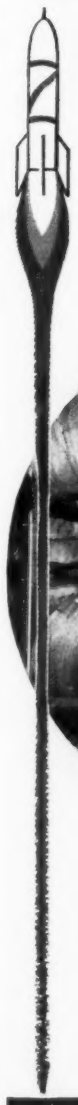
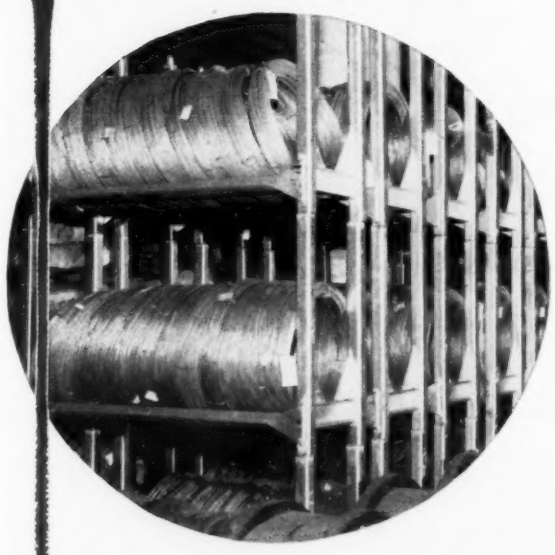


put your upper space to work!

get your materials off the ground with EMI RACKS



you can stack or ship anything in any industry on EMI RACKS

WELL STACKED

COMPLETE METAL WORKING FACILITIES INCLUDING . . .

TUBING—Square, Round, Rectangular and special shapes

WIRE MESH—All Gages

SPECIAL FABRICATIONS

Write for complete catalog!

EQUIPMENT MFG. INC.

21566 HOOVER ROAD DETROIT 5, MICHIGAN

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NEW BALANCED CUTTING ACTION

Severance ECARNO-MILLS

THE ECONOMY MILL NEW DESIGN NEW CARBIDE

Make your money count! Replace more H.S. Rotaries and Mounted Grinding Points.

A NEW LOW PRICED HIGH CLASS PERFORMER

YOUR SPECIAL DEBURRING PROBLEMS ARE SOLICITED

Made by the originator of ground-from-the-solid Rotary Files, and pioneer in this type of Carbide Mill, who presently offer the largest range of standard types, shapes, and sizes.

OPERATE EFFICIENTLY AT USUAL CARBIDE SPEEDS, YET PERFORM BEAUTIFULLY AT THE SLOWER SPEEDS OF STEEL CUTTERS

PHONE, WIRE, OR WRITE US NOW FOR PRICES

Severance TOOL INDUSTRIES INC.
761 Iowa Ave. Saginaw, Michigan
Ask for a Severance catalog today!

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A LIFETIME DIAL INDICATOR

with the maintenance-free "H" Movement

Rugged — shockproof — withstands more impact. Improved life under all conditions. All gears, racks, and pinions precision hardened — friction reduced 16% to 25%, depending upon magnification . . . a new high in sensitivity. Calibrated accuracy greatly improved. Off-white dials and fine line graduations facilitate readings. Available in four sizes.

You can get this new style low maintenance Indicator in Regular, Wetproof, and Long Range Models: add "H" after catalog number of indicator desired. Ask for Catalog No. 55 and price list.

FEDERAL PRODUCTS CORPORATION
8176 Eddy Street • Providence 1, R. I.

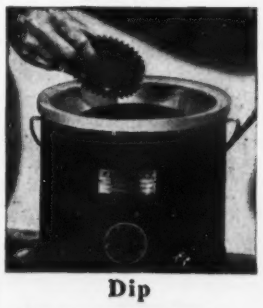
Ask **FEDERAL** *First*

FOR RECOMMENDATIONS IN MODERN GAGES . . .

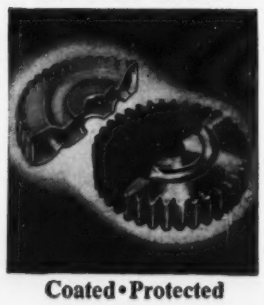
▲ For more details circle NED-575 F8 on enclosed inquiry slip ▲

HOT MELT PLASTIC COATINGS
for GEARS • TOOLS • PRECISION PARTS

BEFORE SECONDS AFTER



Dip



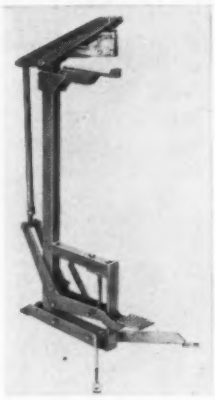
Coated • Protected

DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's durable, transparent plastic coatings. Merely melt coating briquette, dip parts, cool. Lasts indefinitely. Tough; abrasive, moisture, rust resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts; save money.

Write for Bulletins and Free Samples
Fidelity Chemical Products Corp.
479 Frelinghuysen Avenue, Newark 5, N. J.

▲ For more details circle NED-576 F8 on enclosed inquiry slip ▲

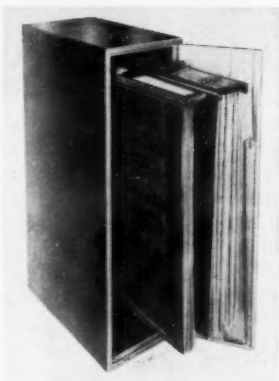
FOOT-OPERATED STAPLERS
portable units weigh only 48 lb



Smooth toggle-action linkage between the foot pedal and stapling head is a feature of four models of foot-operated Duo-Fast staplers. The portable units weigh 48 lb and can be bolted down. Solid post model for stapling carton bottoms has a 10-in. reach and a 24-in. deep post. Second model has a hinged post for added clearance for inserting cartons into position. Straight arm model with 10-in. reach is for stapling flat and telescopic cartons and corrugated fillers. Fourth model is a table tacker for assembling small wooden shipping boxes. As all models are basically the same, one can be converted to another with an adjustment of parts. Six stapling heads from light to heavy duty are offered. Machines can be converted to air operation. Made by **Fastener Corp.**, 3708 River Rd., Franklin Park, Ill.

▲ For more details circle NED-577 F8 on enclosed inquiry slip ▲

BLUEPRINT FILE
holds 150 sheets in 12 lineal inches



Each blueprint, drawing, plan, or map stored in this vertical blueprint file is filed individually and hangs flat and free from wrinkles. File consists of wall mounted bracket with up to 150 aluminum hangers. By attaching tubular tape to the sheet, it is easily slipped on or off the hanger. Thus, 150 sheets of any length can be filed in 12 lineal inches. A cabinet is offered with slide out rack for protecting valuable prints. Made by **Plan Hold Corp.**, Dept. F, 5204 Chakemco St., South Gate, Calif.

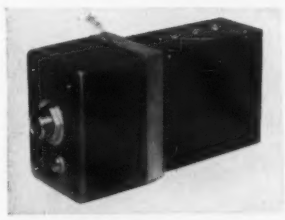
▲ For more details circle NED-578 F8 on enclosed inquiry slip ▲

DRUM HOISTING YOKE
used with an overhead hoist

Quick-attaching girdle of this drum hoisting yoke can be adapted for lifting and pouring contents of both steel and fiber drums. Used with an overhead hoist, it has a mechanical locking device which permits rotating and locking for pouring. Drum loads up to 1000 lb can be handled. Made by **Sterling, Fleischman Co.**, Dept. 8, Box 94, Broomall 1, Pa.

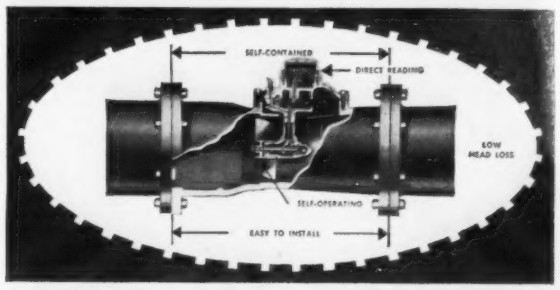
▲ For more details circle NED-579 F8 on enclosed inquiry slip ▲

ELECTRO-HYDRAULIC VALVE
has accurate flow modulation



Only a small signal in the milliampere range is required for control of this industrial electro-hydraulic servo valve. It provides accurate flow modulation required for closed-loop, program-controlled combinations of position, velocity, and acceleration. It is rated 10 gpm maximum flow at 1000 psi, assuming a one-third pressure drop across the valve, and operates on supply pressure up to 3000 psi. By means of the mechanical feedback linkage the valve can be trimmed to handle 10 gpm with as little as 300 psi supply pressure. It can be gasket or subplate-mounted or manifolded to a hydraulic motor. Valve is compatible with programming command signals ranging from a simple calibrated potentiometer to punched or magnetic tape reader systems. Made by **Vickers Inc.**, 1456 Oakman Blvd., Detroit 32, Mich.

▲ For more details circle NED-580 F8 on enclosed inquiry slip ▲



LOWEST COST TOTALIZING METER FOR LIQUIDS!

- For light oils, gasolines, and water
- For pacing additive and sampling proportioning pumps
- For predetermined batch control
- For buying or selling liquids

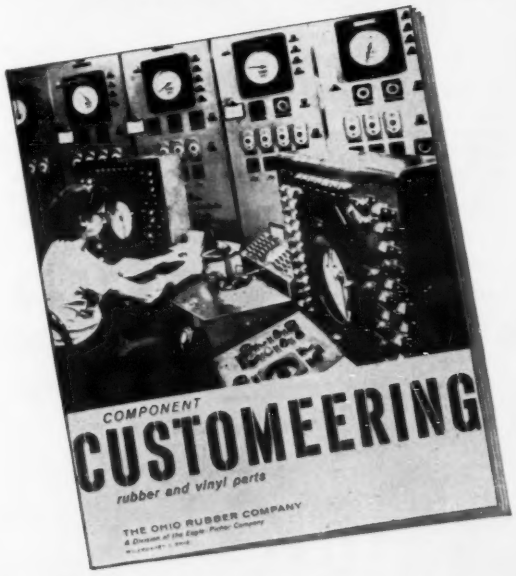
Builders PROPELOFLO® Meter, accurate within ±2% of actual flow over rated operating range, for 2 to 20 inch lines. Rated capacities range from 20 to 5,800 gpm. Request Bulletin 380-K4B for complete data. Write **Builders-Providence, Inc., 425 Harris Avenue, Providence 1, Rhode Island.**

BUILDERS-PROVIDENCE DIVISION OF B-I-F INDUSTRIES BIF METERS FEEDERS CONTROLS

▲ For more details circle NED-581 F8 on enclosed inquiry slip ▲

NEED RUBBER and VINYL PARTS?

- **Molded**
- **Extruded**
- **Bonded to Metal**



New free folder on ORCO component service

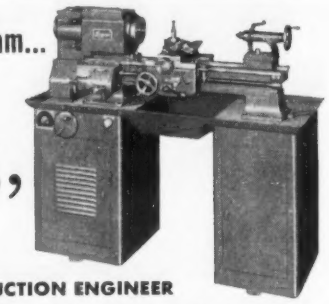
As a "manufacturer's manufacturer" Ohio Rubber is geared to produce large quantities of component parts made of natural rubber, synthetic rubber, silicone rubber, polyurethane, and flexible vinyl—all "customeered" to your specifications.

IT COSTS NOTHING TO FIND OUT how ORCO's technical know-how, facilities and experience can help you solve your component part problem, whatever it is. Just describe your particular requirement. Our technical people will work with you until your requirements have been satisfied. Be sure to send for your free copy of the new ORCO COMPONENT CUSTOMEERING folder.

The OHIO RUBBER Company
A Division of The Eagle-Picher Company
WILLOUGHBY, OHIO

▲ For more details circle NED-582 F8 on enclosed inquiry slip ▲

"When lathes jam...



look out!"

SAID THE PRODUCTION ENGINEER

"Any man who specifies or influences the purchase of metal-working lathes knows that jamming of a lathe carriage or tool by an inexperienced operator can mean costly gear breakage and flying metal. But it *does* happen.

"What *I* didn't know was that *only* Logan Engineering makes 12" screw cutting and turret lathes with a *built-in* automatic safety gear as standard equipment. At the instant of overload the safety gear disengages, guarding against damage in the train of gears from spindle through gear box.

"This fine Logan 12" lathe—with 38 to 1400 rpm variable speed drive and no manual belt shifting—gives us 'built-in' insurance against heavy repairs and production slow-downs. And for a lower price!"

NOTE: These features are standard, too, on Logan 14" screw cutting models (variable speed range, 38 to 1200 rpm). On Logan 11", 10" and 9" lathes, automatic safety gear is optional.

LOOK AT A Logan BEFORE YOU LEAP

Catalog on request. Phone your Logan dealer or drop a line to—

LOGAN ENGINEERING CO.

Dept. Q-658, 4901 Lawrence Avenue, Chicago 30, Illinois

▲ For more details circle NED-583 F8 on enclosed inquiry slip ▲

NEW!

FAFNIR MINIATURE BALL BEARINGS

featuring

1. *Extra-clean, vacuum melt 440C stainless steel*
2. *Balanced design*
3. *Precision tolerances*

In this new Fafnir series, extra-clean, vacuum melt 440C stainless steel eliminates chances of pits or imperfections in races. Retainers are designed for each bearing size, assuring proper balance. Bearings are made to ABEC-5 tolerances or better, with superior race finish producing super-sensitive bearings with low torque values. Write for bulletin. The Fafnir Bearing Company, New Britain, Conn.

OPEN, TWO SHIELD, FLANGED, AND FLANGED TWO SHIELD TYPES AVAILABLE IN EACH SIZE.

FAFNIR BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

▲ For more details circle NED-584 F8 on enclosed inquiry slip ▲

for truly AUTOMATED SPEED CONTROL

Where automation performance depends on accurate speed control.

Graham

Most Reliable Variable Speed Drive

- UNLIMITED SPEED RANGE
- UNMATCHED ACCURACY
- ULTIMATE SIMPLICITY AND COMPACTNESS
- NO BELTS OR TUBES
- LOW COST

SEE OUR CATALOG IN SWEET'S PRODUCT DESIGN FILE OR WRITE FOR COPY

Greater accuracy of speed setting and holding on open loop control — wider range and faster response for closed loop systems.

CONTROL SPEED in ADJUSTABLE PROPORTION to:

- POTENTIOMETER SETTING or RECORDER SLIDEWIRE
- .5 to 5 ma or any TRANSDUCER SIGNAL
- 3 to 15 PSI AIR SIGNAL
- PARALLEL BINARY SIGNAL from PUNCH CARDS, TAPES, COMPUTERS or BINARY TRANSDUCERS
- VARIABLE FREQUENCY SIGNAL.

ENTIRE UNIT EXPLOSION PROOF, if desired.

GRAHAM TRANSMISSIONS, INC.

DEPT. NED • MENOMONEE FALLS, WISCONSIN

▲ For more details circle NED-585 F8 on enclosed inquiry slip ▲

AIR OPERATED CHAIN HOIST
raises 1000 lb at 50 fpm

Reversible eight-blade air motor powering the Model H-1000 chain hoist enables unit to raise a 1000-lb load at rate of 50 fpm. Lowering rate is up to 96 fpm under maximum load. Available throttle controls are either a manual nylon rope and pendent, or a remote control which allows one-hand hoist operation by means of two-lever (lift and lower) throttle at hand height. Hoist is offered with roller or link chains and with hook or trolley mounting. Air-cooled disc brakes lock in event of air pressure failure. Unit cannot burn out if stalled. Made by **Thor Power Tool Co.**, Dept. EB, Prudential Plaza, Chicago 1, Ill.

▲ For more details circle NED-586 F8 on enclosed inquiry slip ▲

DEBURRING TOOLS
depth of cut can be regulated

Depth of cut can be regulated on R & R deburring tools, offered in two types. Model 955 utilizes spring tension against the blade to effect cutting action, while Model 956 uses spring tension against the body. The blade is free-floating for self-alignment and uniform stock removal. Chatter is eliminated by keeping the workpiece in continuous contact with the bearing angle of the tool. Performing efficiently at high operating speeds, the tools can be used in a drill press, portable drill, or can be mounted with a suitable handle to make a safe deburring tool for lathe or turret lathe use. Replacement blades are available. Both tool types are made in sizes to 1½-in. diameter. Made by **Universal Engineering Co.**, Dept. B, Frankenmuth, Mich.

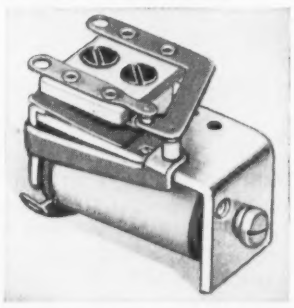
▲ For more details circle NED-587 F8 on enclosed inquiry slip ▲

SAFETY GLASSES
frames have strength features

Groove in the frames of these onyx-on-crystal spectacle type safety glasses holds the lens securely and supports them against being driven backward toward the eyes when struck. The two-tone, flame - resistant, lightweight frames will not conduct electricity. Bridge and frame sizes are marked on each unit. Glasses have permanent wide nose pads and are available with adjustable pads for hard-to-fit workers. Five-barrel hinges and corrosion-resistant metal screws are other features. Three eye sizes, five bridge sizes, curved Super Armorplate lenses in six shades, and clear Plastolite lenses are available. Made by **American Optical Co.**, 1492 Mechanic St., Southbridge, Mass.

▲ For more details circle NED-588 F8 on enclosed inquiry slip ▲

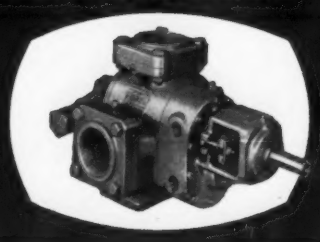
SUBMINIATURE RELAY
for switching radio frequencies



Special contact spring construction of this subminiature relay provides lowest possible capacitance between springs. A low-loss ceramic insulates the contact springs. Relay is used to switch radio frequencies on such applications as antenna change - over on mobile radios. It operates on 6 to 110 v dc. Single-pole single-throw or single-pole double-throw contacts are rated 2 amp at 24 v dc, or 115 v ac noninductive load. Unit measures 1 11/32 x 1 x 11/16 in. overall. Made by **Magnecraft Electric Co.**, 3350K W. Grand Ave., Chicago 51, Ill.

▲ For more details circle NED-589 F8 on enclosed inquiry slip ▲

NEW ROPER PUMP WITH STEAM CHEST



LOW COST METHOD OF HEAT TRANSFER TO PUMP AND PACKING

TWO TYPES OF CONSTRUCTION:

Spec. 3878 Fitted with Bronze Bearings
Spec. 4049 All Iron Construction
All Units Fitted with Aluminum Gaskets and High Temperature Packing

It's a rotary gear unit with the additional feature of a steam chest located between case and outboard bearing . . . transfers heat to both pump and packing. Can be used with steam, hot water or heat transfer oil. Pump and steam chest static tested at 300 PSI; recommended pressure with steam is 125 PSI.

Send for Bulletin 29

ROPER HYDRAULICS, INC.
666 Blackhawk Park Ave.
Rockford, Illinois

ROPER ROTARY PUMPS

▲ For more details circle NED-590 F8 on enclosed inquiry slip ▲

NOW galvanized Sherarduct is coated with NEW FORMULA MVC-1

the modified polyvinyl chloride resin that provides the most effective barrier against corrosive agents of all kinds

Here's what MVC-1 does to even further increase the protection against corrosion offered by the Sherardizing process of galvanizing.

Resistance to Corrosive Attacks—In accelerated salt spray, sulphuric acid and caustic tests conducted by the Pittsburgh Testing Laboratories, new Sherarduct with Formula MVC-1 far outlasted all hot dipped and other high-grade coated and galvanized conduits tested.

Resistance to Flaking—Formula MVC-1 makes a tight, uniform, adhesive coating that withstands bending without cracking or flaking.

Interior Protection—Formula MVC-1 makes new Sherarduct the first conduit with really lasting protection against interior corrosion. MVC-1 is a smooth, uniform coating that not only protects the conduit, but makes fishing easier by reducing friction between wires and conduit walls.

Temperature Resistance—Formula MVC-1 is extremely resistant to high and low ambient temperatures and will withstand the majority of all industrial temperature conditions.

Now Add this New Corrosion Resistance to Sherarduct's Other Features

1. The Sherardizing process of galvanizing that alloys zinc with the conduit walls.
2. Normalized, highly ductile steel for easy bending and threading.
3. Zinc protected threads for complete end-to-end protection.

with MVC-1

SHERARDUCT IS GALVANIZED CONDUIT AT ITS BEST!

National Electric Products

PITTSBURGH, PENNSYLVANIA

2 Plants • 12 Warehouses • 41 Sales Offices

▲ For more details circle NED-591 F8 on enclosed inquiry slip ▲

With heavy duty, rubber tired, ball bearing wheels and one piece fold-down handle, the Wells Model 49A is a metal cutting band saw that's REALLY MOBILE . . . and VERSATILE. Use the 49A as a horizontal cut-off machine (capacity 3½" x 6") or swing the head to vertical position . . . it's an upright band saw.

The optional wheel and handle unit, available for new machines and those already in service, is a tremendous time and labor saver. Ask your local Wells Distributor for details . . . or write for Bulletin 253-H.

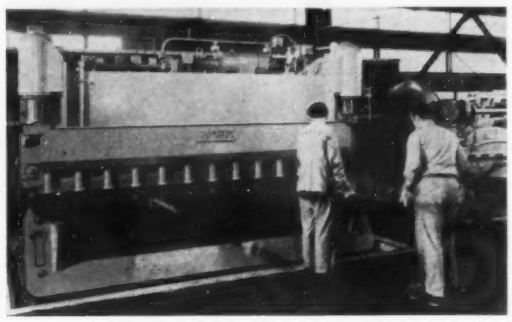
Wells

The Pioneers of Horizontal
METAL CUTTING BAND SAWS
WELLS MANUFACTURING CORPORATION
1313 Harding Ave. Three Rivers, Mich.

▲ For more details circle NED-592 F8 on enclosed inquiry slip ▲

HYDRAULIC SHEAR
handles 26-gage to ¼-in. metal

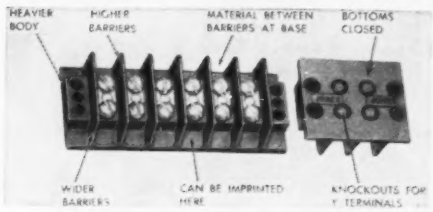
Rake angle of this large hydraulic shear is adjustable to any metal thickness from 26 gage to ¼ in. It cuts stainless steel, aluminum, and most nonferrous alloys.



Bending and bowing of drops, especially from light gage metals, is eliminated. Controlled by portable foot pedal, blade cuts smoothly and without shock on impact. It can be stopped instantly at any point throughout the stroke. Shear will cut sheets ranging from 4 x 12 ft to 7 x 19 ft. Made by **Pacific Industrial** Mfg. Co., Dept. A, 848 49th Ave., Oakland 1, Calif.

▲ For more details circle NED-595 F8 on enclosed inquiry slip ▲

AT LAST—The IDEAL BARRIER TERMINAL STRIP



JONES 500 SERIES
LONGER—STURDIER

Wider and higher barriers for increased creepage distances. Closed bottoms for complete insulation. Material between barriers at the base adds to the strength and maintains the same creepage distance between contact to contact and contact to ground. Can be imprinted here. No insulating or marker strip required. Three series—540, 541 and 542 having the same terminal spacing as our 140, 141 and 142 series.

Complete listing in the new Jones No. 22 catalog. Write for your copy today.

Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle NED-599 F8 on enclosed inquiry slip ▲

WHEREVER SOMETHING STICKS
You'll Find A Use For

IMS
SILICONE FLUID SPRAY

ON FILM SEALERS, CRIMPER JAWS, EMBOSSING ROLLS, PANS; STAMPING, FORMING DIES—MOLDS OF ALL KINDS

SIMPLY SPRAY ON THIS PURE SILICONE FLUID COATING
And your sticking problems are over!

The most economical way to apply costly Silicone Release Agents!

SAFE — NON-TOXIC
CLEAN — LONG LASTING

Handy Self Dispensing Can

Has No-Fumble, Speedy Spray Head

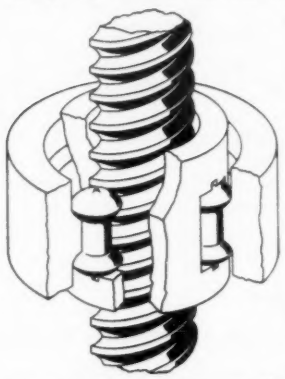
PRICES (Delivered)
Sample Can..... $2.00
Per Unbroken Dozen..... $18.00
Per Unbroken Gross.... $197.40

INJECTION MOLDERS SUPPLY CO.
3514 LEE RD. CLEVELAND 20, O.

▲ For more details circle NED-593 F8 on enclosed inquiry slip ▲

ANTIFRICTION BEARING SCREW
converts rotary to linear movement

Designed into nut and screw assemblies, this Roton antifriction bearing furnishes efficient conversion of rotary to linear movement, and vice versa, over a wide range of work loads and power inputs. Dumbbell-shaped bearing units featured in the design are caged and roll within an annularly grooved nut functioning as the outer race. Helical thread lead of screw acts as the inner race. Planetary action of caged unit mechanically reduces linear advancement relative to thread lead, thereby supplementing speed reducers and gear boxes, or eliminating them when ratio permits. Assembly provides freewheeling at end of travel pending reversal of motion. Units will not jam or freeze up. Made by **Anderson Co.**, Dept. RTX, 1075 Grant St., Gary 40, Ind.



▲ For more details circle NED-596 F8 on enclosed inquiry slip ▲

Ductile Iron Castings

Cooper-Bessemer Corp. — Engineering information dealing with the use of ductile iron castings for machine parts is presented in 12-page Bulletin MPC. Design data presented include material specifications, foundry facilities for custom-made castings, and typical parts.

▲ For more details circle NED-597 F8 on enclosed inquiry slip ▲

ELIMINATE COSTLY LEAKS
. . . in Stainless Process Lines

Request your copy of "Speedline Catalog" today!

Gasket Seated Union features stainless ferrules with cadmium-plated carbon steel nut.

Gasket seated to prevent leakage . . . bi-metallic for easy disassembly and make-up without galling or seizing—the Speedline Union is available in two styles for welding or expanding to low cost Schedules 5 and 10 pipe or Speedline fittings. Learn how the complete line of Speedline stainless steel fittings offers a degree of process line efficiency and economy not possible with conventional fittings!

807

Distributors are located in principal cities from coast to coast

Speedline® STAINLESS STEEL FITTINGS
manufactured by
HORACE T. POTTS CO. 532 E. Erie Ave. Phila. 34, Pa.

▲ For more details circle NED-600 F8 on enclosed inquiry slip ▲

FIND OUT HOW
new tool balancers cut operator fatigue

Write for free bulletin

Bulletin 65-11 tells how Gardner-Denver's Keller Tool Balancers reduce operator fatigue by supporting weight of tool—by always keeping it handy. They also prevent tool damage due to dropping.

Keller Tool Balancers are available in seven models. Two for light suspension of screw drivers, nut setters, drills, tappers. Five for heavy-duty balancing in 20-, 30-, 40-, 50-, 60-lb. capacities.

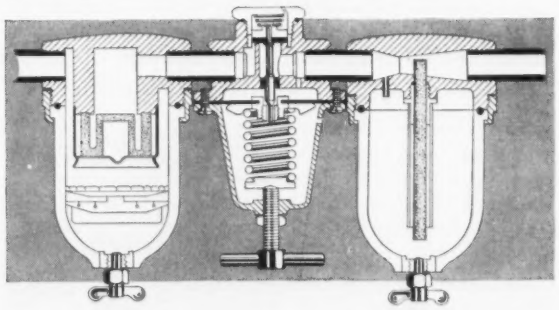
Request free Bulletin 65-11.

ENGINEERING FORESIGHT—PROVED ON THE JOB
IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING
Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

GARDNER - DENVER

▲ For more details circle NED-594 F8 on enclosed inquiry slip ▲

3 WAY PROTECTION
packaged filter - regulator - lubricator



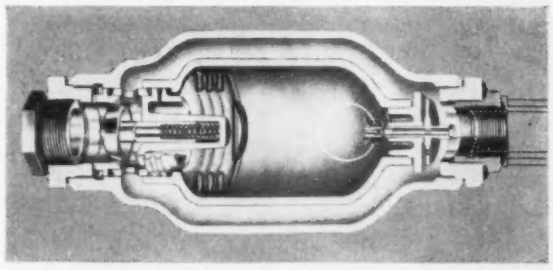
This compact, easy-to-install Gardner-Denver combination assures a continuous supply of clean air at desired pressures . . . provides proper tool lubrication. The assembly utilizes a straight-line air flow principle with low pressure drop throughout the system—less than 1 psi at maximum rated capacity. Individual units also available. Write today for complete information.

ENGINEERING FORESIGHT—PROVED ON THE JOB
IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING
Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

GARDNER - DENVER

▲ For more details circle NED-598 F8 on enclosed inquiry slip ▲

NO DRY RUNS
with this automatic line oiler



The Gardner-Denver Model LO-12 Automatic Line Oiler assures positive protection against running air-operated equipment without adequate lubrication. When all the oil in the LO-12 is used, air in the line automatically shuts off. There is absolutely no chance for dry runs.

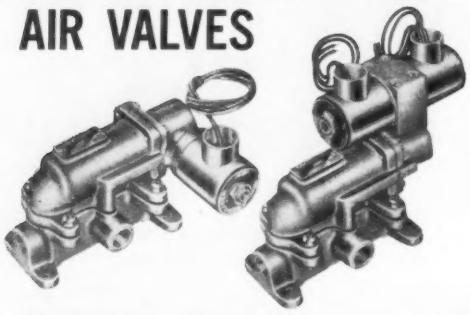
You increase operating efficiency of all air actuated equipment with air consumption from 25 to 500 cfm. Write for Bulletin LO-2.

ENGINEERING FORESIGHT—PROVED ON THE JOB
IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING
Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

GARDNER - DENVER

▲ For more details circle NED-601 F8 on enclosed inquiry slip ▲

NEW SUB-BASE SINGLE AND DOUBLE SOLENOID AIR VALVES



. . . Complete series: voltages, sizes, capacities, in both types

. . . Greater versatility in installation, interchangeability, maintenance

Sturdy cast meehanite base has all ports required for piping. Permits removal of valve mechanism for service. Cuts downtime. N.P. Thd. in 1/4", 3/8", 1/2" and 3/4" sizes. Flow capacities: 115 to 270 cu. ft. per minute. Make possible superior control for both in-plant installations and original equipment.

Write for detailed literature. These valves are part of Schrader's extremely varied lines of air products. Direct all your air control questions to us.

Schrader®

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Inc.
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

▲ For more details circle **NED-603 F8** on enclosed inquiry slip ▲

NEW CUT-OFF WHEEL

averages 33% longer life!

New Bay State manufacturing techniques control wear rates of bond, reinforcement and abrasive in the BZ2AA so closely that this cut-off wheel *averages* one third more cuts on any given type of work piece than its nearest competitor.

Result: Substantial savings in both wheel cost and down-time.

Your Bay State distributor can give you full details or write direct for technical data sheet.

BAY STATE ABRASIVES

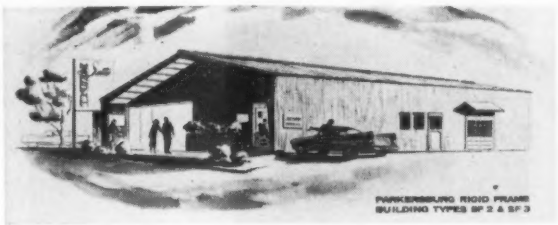
Bay State Abrasive Products Co., Westboro, Mass.
In Canada: Bay State Abrasive Products Co. (Canada) Ltd., Brantford, Ontario. *Branch Offices:* Bristol, Conn., Chicago, Cleveland, Detroit, Pittsburgh. *Distributors:* All principal cities.

▲ For more details circle **NED-604 F8** on enclosed inquiry slip ▲

▲ For more details circle **NED-605 F8** on enclosed inquiry slip ▲

METAL BUILDING
40, 50, 60, and 80-ft spans offered

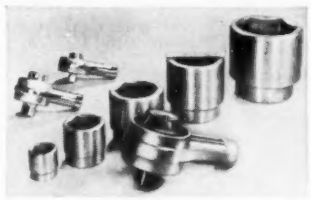
High tensile corrugated galvanized steel is standard covering for the SF Series metal building. Structures have standard eave heights from 10 to 20 ft and clear



span widths of 40, 50, 60, or 80 ft, in any multiple. Building lengths are infinite with 20-ft column spacing as standard and 16-ft spacing optional. Structure can be furnished with one or more sides open or with drop skirts. Corrugated aluminum or any exterior masonry treatment can be adapted. Sliding and single swing doors, windows, skylights, ventilators, porches, partitions, and ceilings are available accessories. Made by **Parkersburg Rig & Reel Co.**, Building Div., Dept. SF, Parkersburg, W. Va.

▲ For more details circle **NED-606 F8** on enclosed inquiry slip ▲

LARGE SOCKET WRENCHES
torque rated up to 4000 lb-ft



Added to line of geared head wrenches is a larger size wrench and a new line of large sockets. The new model TD-1500 is rated at 4000 lb ft with 1 in. input drive and 1½ in. output drive. Large sockets can be produced in 1½ to 8-in. sizes, in increments of a few thousandths of an inch if necessary. Torque ratings covered by all tools range from a few hundred to 4000 lb-ft. Made by **X-4 Corp.**, Dept. 48, Box 1148, West Acton, Mass.

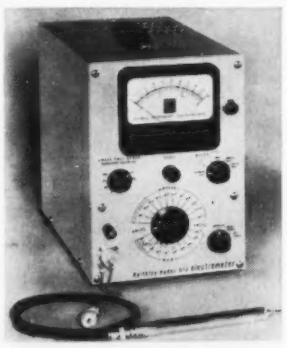
▲ For more details circle **NED-607 F8** on enclosed inquiry slip ▲

SHEET METAL BRAKES
can form 180-degree flanges

Portable or bench-mounted sheet metal brakes permit free-hand forming and bending of sheet metal parts in 20 to 16-gage sheets from 26 to 36 in. wide. They will form 180-degree flanges in one continuous operation, and can bend complex forms, as well as do regular brake work. The universal model brake will form around the inside of an opening, double-seam plenum caps, and make radius bends to ½ in. Easy adjustments for gage and angle of bend are provided. A floor stand is optional. Made by **R. E. Smith Mfg. Co.**, 1126 Elizabeth St., Waukegan, Ill.

▲ For more details circle **NED-608 F8** on enclosed inquiry slip ▲

MULTIPURPOSE ELECTROMETER
makes almost all dc measurements

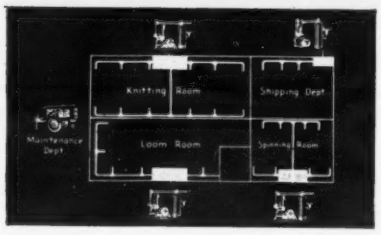


Direct - current voltage, amperage, and resistance over broad ranges are measured by the Model 610 Electrometer which also serves as a direct current amplifier. Ranges include 10 mv to 100 v, 3 to 10^{13} amp, and 10 to 10^{14} ohms, full scale. As a dc amplifier, it provides gains from 0.1 to 1000. Unit features selectable input impedance from 1 ohm to greater than 10^{14} ohms; zero drift less than 2 mv per hour after warmup; 10-v and 1-ma outputs to drive oscilloscopes and recorders; and internal resistance and voltage supply standards. Uses include measuring voltages in piezo-electric crystals, static charges, and vacuum tube electrodes; currents in ion chambers and semiconductors; and checking insulation leakage. Made by **Keithley Instruments, Inc.**, Dept. N, 12415 Euclid Ave., Cleveland 6, Ohio.

▲ For more details circle **NED-609 F8** on enclosed inquiry slip ▲

UNIT SYSTEM

UNIT SYSTEM



UNIT SYSTEM

Schramm Compressors offer savings on installation and operation

It costs far less to install several Schramm Air Compressors as a unit system than it does to install one large compressor. Long, costly pipe lines are eliminated. Compressors take up a minimum of space. You can put them where they're needed—right at the job. And you can increase air output simply by adding a unit as your needs grow.

For complete information, write for Catalogs GC-57 and 5510, or see your nearest Schramm Dealer.

Schramm, Inc.
Manufacturers of Air Compressors
700 North Garfield Ave. West Chester, Pa.

UNIT SYSTEM

▲ For more details circle **NED-610 F8** on enclosed inquiry slip ▲

SPENCER
Vacuum Cleaning

. . . guards Quality at SPERRY

Navy Gunsight Computer being cleaned by Spencer vacuum at Sperry Gyroscope Co., Great Neck, New York

A SPENCER central vacuum cleaning system, piped to work stations in final assembly areas, permits quick, thorough removal of any dust or foreign matter. Whatever your need in a vacuum cleaning system—for protection of your product or general plant maintenance—it will pay to check with SPENCER.

Request Catalog #155-B.

ALSO MANUFACTURERS OF INDUSTRIAL PORTABLE VACUUM CLEANERS

The SPENCER TURBINE COMPANY
HARTFORD 6, CONNECTICUT

▲ For more details circle **NED-611 F8** on enclosed inquiry slip ▲

Terror of Darkness
Need Not Happen in Emergencies!

Protect your plant and your personnel against the hazards of sudden blackouts . . . especially during those first 60 seconds of terror-striking pitch blackness. Install BIG BEAM Automatic Lights—NOW!

Big Beam Automatic EMERGENCY LIGHTS
With Built-In Automatic Chargers

Model 2ATW plugs into lighting outlet. Gives instant light automatically whenever regular current fails. Available with either 25, 30, 40, 80 or 100 ampere hour glass jar batteries.

Other BIG BEAM LAMPS

Model No. 287EX Explosion-Proof Hand Lamp | Model No. 108F Flashing Flare Beacon | Model No. 164 Sealed Beam Beacon Lamp

Write for Complete Information 7026

U-C-LITE MFG. CO. 1073 W. Hubbard St., Chicago 22, Illinois
CANADA: Bernard Marks & Co., 70 Claremont St., Toronto 3, Ontario

▲ For more details circle **NED-612 F8** on enclosed inquiry slip ▲

Tempilstiks°

FOR ALL HEAT-DEPENDENT OPERATIONS . . .

looks like a crayon
marks like a crayon
tells temperatures like
a precision instrument

Sixty-three different compositions enable you to determine and control working temperatures from 113° to 2000°F. TEMPILSTIK° marks on workpiece "say when" by melting at stated temperatures — plus or minus 1%.

Also available in liquid and pellet form . . . Write **Advertising Division** for sample TEMPIL° pellets. . . State temperatures of interest — please!

Tempil°
CORPORATION
132 WEST 22nd STREET, NEW YORK 11, N. Y.

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PROPELLAIR®

...built to solve your "heavy duty" ventilating problems

...mount in any position

Heavy duty Propellair Type "CD" fans are designed for versatility and rugged duty. They can be mounted in side walls, roof ventilators, hoods, ducts and machinery in any position you require. They are ideal for "tough" ventilating jobs like removing heat, moisture, smoke and dust laden air. You get greater efficiency and quieter operation, because the exclusive venturi entrance ring prevents wasteful recirculation. The rigid, cast aluminum, precision balanced air-foil propeller runs quieter and retains its clean aerodynamic characteristics* at all operating pressures. Powered by dependable Robbins & Myers Motors of any design you need, they are covered by a single name-plate guarantee. Available in sizes from 12" to 60" for from 1020 to 85000 CFM air delivery. Let Propellair engineers survey your needs and recommend the correct ventilating equipment.

WRITE FOR BULLETIN NO. 690-N

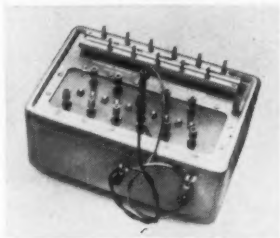
R&M PROPELLAIR®
DIV. OF ROBBINS AND MYERS, INC.
SPRINGFIELD, OHIO

Certified Ratings PFMA

MOVING AIR IS OUR BUSINESS

▲ For more details circle **NED-614 F8** on enclosed inquiry slip ▲

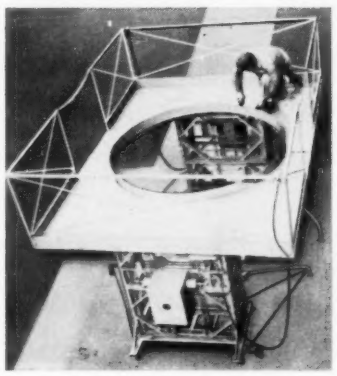
RESISTANCE CALIBRATOR for calibrations up to 100 megohms



Accurate to ±0.01 per cent on resistance calibrations up to 100 megohms, this resistance calibrator consists of ten calibrated precision steps using encapsulated precision wire wound resistors. Each step is adjusted to ±0.01 per cent of nominal. Transfer of low range accuracy standards to the higher ranges takes place with an additional error of transfer of less than ±0.0001 per cent per 2 decades up to 10 megohms and ±0.01 per cent to 100 megohms. Calibrator can also be used as a precision voltage divider. It is available with oil-filled, hermetically-sealed, wire wound resistors on special order. Made by **International Resistance Co.**, Hycor Div., Dept. 53, 12970 Bradley Ave., Sylmar, Calif.

▲ For more details circle **NED-615 F8** on enclosed inquiry slip ▲

MISSILE WORK PLATFORM has 500-1000-lb load capacity



Two separate semicircular platforms of welded steel construction, equipped with swivel casters and outrigger for stability, comprise this missile work platform. Built to meet individual requirements as to height and size, platform has rated load capacity of 500 to 1000 lb. It is electrically operated and comes erected, ready for use. Made by **Atlas Industrial Corp.**, 845-ND 39th St., Brooklyn 32, N. Y.

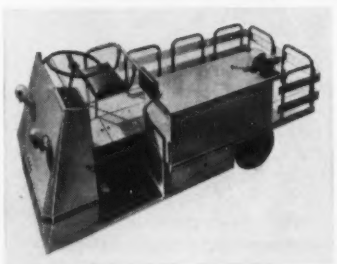
▲ For more details circle **NED-616 F8** on enclosed inquiry slip ▲

HIGH PRESSURE BOTTLE for liquid and gas storage

Continuous windings of glass fiber, impregnated with epoxy resin, provide these high pressure bottles for liquid and gas storage with light weight, strength, and shatter-proof features. Originally developed for jet aircraft use, they are now available in various sizes and designs for other applications. Weight savings may be up to 50 per cent over a steel container for the same volume and pressure. Bottles can be fabricated for any number of cycles from 1000 to 10 million, and for 100 to 5000-psi operating pressures. Made by **White Sewing Machine Corp.**, Apex Reinforced Plastics Div., Dept. NED, Washington & Elm Streets, Cleveland 13, Ohio.

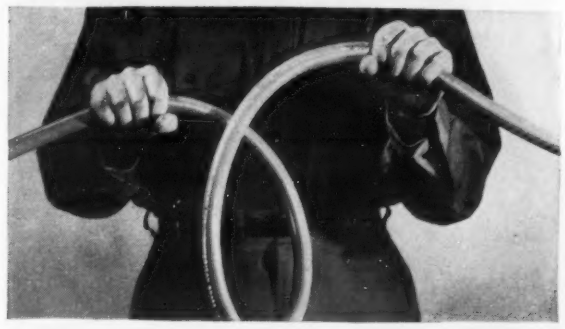
▲ For more details circle **NED-617 F8** on enclosed inquiry slip ▲

MAINTENANCE TRUCK has built-in work facilities



Powered by electricity and capable of carrying up to 1-ton loads, the three-wheel Model 71 Electri-Car industrial maintenance truck is operated by a stand-up driver, carries a sit-down rider, and has four industrial batteries and a built-in automatic battery charger. Built-in maintenance facilities include a large work bench with vise, tool box, and a large load area protected by steel and aluminum stakes. Dyna-Power gear motor is built for heavy duty operation. The truck is 40 in. wide, 108 in. long, and has a factory-set maximum speed of 4, 6, 8, 10, 12, or 14 mph. Made by **Victor Adding Machine Co.**, Electri-Car Div., 3900 N. Rockwell St., Chicago 18, Ill.

▲ For more details circle **NED-618 F8** on enclosed inquiry slip ▲



Now... improved Sealtite E.F.

Sealtite type E.F.* – the original flexible, liquid-tight conduit, first to meet J.I.C. requirements – is now better than ever. New design has made it stronger, tougher, more durable in service . . . easier to install. Heavier extruded PVC jacket offers greater resistance to abrasion, cutting and tearing . . . greater oil resistance . . . greater holding power for fittings. It is more flexible – permits smaller bending diameters. New convenient markings save time, prevent waste. Length is indicated by arrows at 1-foot intervals. Trade size in inches is shown on cover. In black or gray. For free sample and more information, write: The American Brass Company, American Metal Hose Division, Waterbury 20, Conn.

*Pat. Applied For 57180 Rev.

SEALTITE® flexible, liquid-tight conduit
an ANACONDA® product

▲ For more details circle **NED-619 F8** on enclosed inquiry slip ▲

INDUSTRIAL WIRE CLOTH

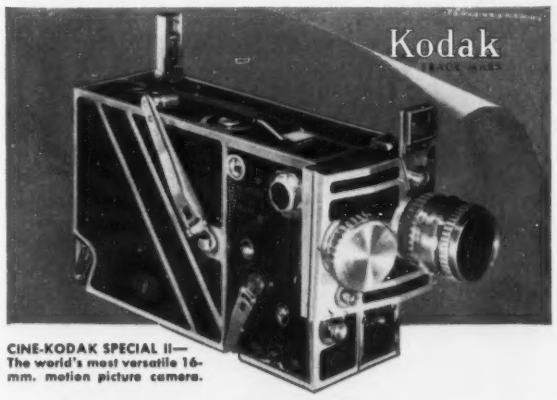
• REYNOLDS WIRE DIVISION of the National-Standard Company produces industrial wire cloth in standard and special weaves in a complete range of meshes, metals, alloys and coatings . . . in all normally required widths.

Write to Reynolds for specific information on the products we make and on our facilities for developing special wire cloth to fit your specifications.

Reynolds Wire Division • Dixon, Illinois

NATIONAL NS STANDARD

▲ For more details circle **NED-620 F8** on enclosed inquiry slip ▲



CINE-KODAK SPECIAL II—
The world's most versatile 16-mm. motion picture camera.

Make movies that work for you!

In almost every industrial activity—engineering, manufacturing, employee training, research, safety and methods evaluation—in-plant movies are the fastest, easiest, and most effective method for putting across your story.

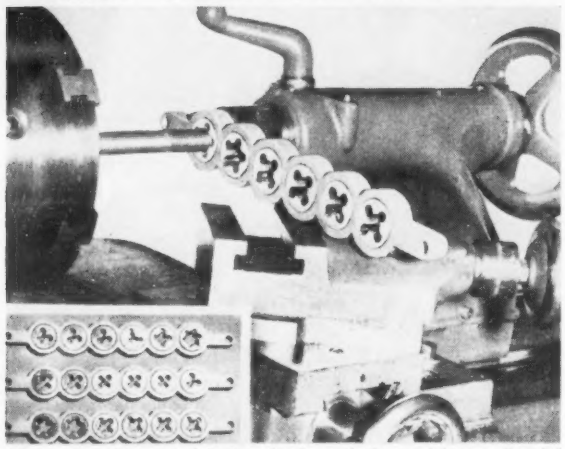
And for on-the-job movie making, many leading industrial companies have chosen the Cine-Kodak Special II Camera. It has the versatility to handle almost any type of job. Yet its simplicity of operation enables you to get high-caliber results almost as easily as taking home movies.

WRITE FOR FREE BOOKLET, V1-3, describing the Cine-Kodak Special II.

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

▲ For more details circle **NED-621 F8** on enclosed inquiry slip ▲

NEW TIME-SAVER TOOL



When your machine or tool is down for the need of a special screw, threaded shaft or rod, this threading tool is ready to cut 18 different size threads, on lathe, drill press or at the vise. Your mechanics will save the time it takes to look for and mount dies in holder.

All dies std. 1" O.D., sizes 1/2" to 1/8" U.S.S. & S.A.E.

1/2 -13	5/16-18	10-32	**NOTE** — Exclusive feature, face of each die is parallel with back of holder. Dies are adjustable within holder by three allen cone point screws. **Holders in black magic finish**
1/2 -20	5/16-24	8-32	
7/16-14	1/4 -20	6-32	
7/16-20	1/4 -28	5-40	
3/8 -16	12 -24	1/8 pipe	
3/8 -24	10 -24	1/4 pipe	

DURING OUR SPECIAL INTRODUCTORY OFFER

All orders sent on a 10-day approval basis. Order direct.

Complete set of three holders with 18 adjustable high grade dies, sizes as shown above. $39

MOHR TOOL & MFG. CO., Box 63-G, Maywood, Ill.

For more details circle **NED-622 F8** on enclosed inquiry slip

CUT COSTS with FIR PLYWOOD

Fir plywood spacers last twice as long as select hardwood previously used in zinc electrolysis at Consolidated Mining & Smelting Co., B. C. plant. Switch has sharply lowered maintenance and replacement costs. Where hardwood lasted only 90 days, Exterior plywood stands up 180 days. Spacers, three inches wide, 3/4-inch thick, are used to separate annode and cathode plates in 1,000 tanks which carry 10% sulphuric acid solution.

Only plywood with DFPA grade-trademarks is made and tested under industry-wide Douglas Fir Plywood Association quality control program. Look for letters DFPA on the panel.

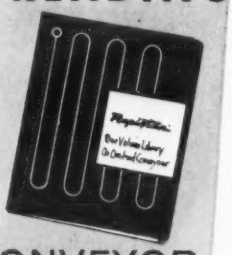
DFPA TESTED QUALITY

Write for New File Folder Catalog

DOUGLAS FIR PLYWOOD ASSOC., DEPT. 181, TACOMA 2, WASH.

For more details circle **NED-623 F8** on enclosed inquiry slip

PROFITABLE READING



Free! THIS ONE-VOLUME LIBRARY ON OVERHEAD CONVEYOR

More than a dozen industrial applications of overhead trolley conveyors are illustrated in this One-Volume Library on Overhead Conveyor. Helpful facts are detailed on specifications, installation, and the care and use of this equipment in transportation, processing, assembly operations, storage. Bound to be profitable reading if you're interested in low-cost solutions to materials handling problems. Write for it now, while stamps are still only 3c. Free on request. No obligation, of course.

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Rapistan® OVERHEAD CONVEYOR

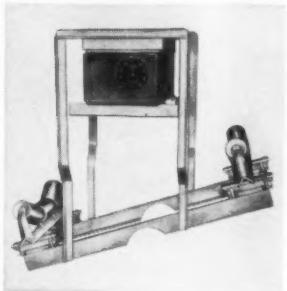
RAPISTAN-KEYSTONE, INC.
21752 W. 8 Mile Rd.
Detroit 41, Michigan

O K! Send me the library of overhead conveyor ideas

FIRM _____
ADDRESS _____ ZONE _____
CITY _____ STATE _____
ATTN. OF _____
KIND OF BUSINESS _____

For more details circle **NED-624 F8** on enclosed inquiry slip

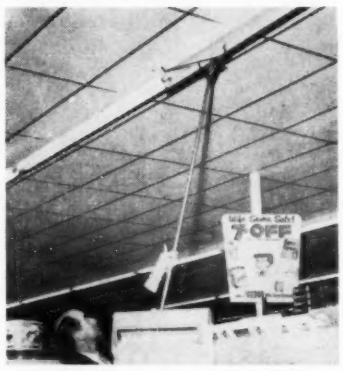
TOTALIZING BELT SCALES
handle 100 lb to 300 tons per hour



Capacities of 100 lb to 300 tons per hour are available in this totalizing inventory belt scale which recalibrates linearly. Scale and rollers support, at any location, level or inclined conveyor systems handling ores, chemicals, or other materials. Endless belt is not altered or interrupted. Totalizer can be remotely located or read directly at scale. To recalibrate, a known test weight is placed on the scale platform, and a direct linear setting made without use of compensating chain or involved calculations. Plate leverage system accuracy is unaffected by dust, dirt, shock, or vibration. Made by **Thayer Scale Corp.**, Dept. NED, Thayer Park, Pembroke, Mass.

For more details circle **NED-625 F8** on enclosed inquiry slip

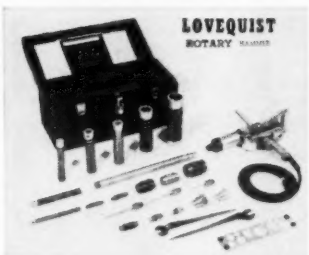
LAMP CHANGING DEVICE
allows 14-ft reach above floor



With this Reach-a-lamp lamp changing device, an inexperienced worker can service fluorescent and Slimline lighting fixtures as high as 14 ft above floor. Mechanical dexterity of device allows dust cloths or sponges to be held in contact with lamp or fixture for cleaning. A slip-on taper fit receptacle handles horizontally or vertically mounted starters. Made by **Raymond Johnson Mfg. Co.**, Box 7504, Oklahoma City, Okla.

For more details circle **NED-626 F8** on enclosed inquiry slip

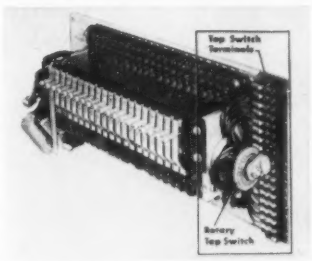
ELECTRIC ROTARY HAMMER
impact-drills concrete, masonry



Simultaneous rotating and hammering action of this portable electric rotary hammer allows fast drilling of reinforced concrete and masonry using detachable bits. Model L-100 operates on 115-v, 5-amp ac-dc and is rated 5/8 hp. It rotates 1000 rpm and delivers 6000 impacts per minute. This model weighs 9 1/2 lb and is 15 in. long. The 115-v 9-amp Model L-200 is rated 1 1/4 hp, weighs 18 1/2 lb, and is 18 in. long. It rotates at 1100 rpm and delivers 6600 impact blows per minute. Carbide tipped bits for drilling 3/16 to 4-in. diameter holes are available. Made by **Lovequist Engineering Co.**, 15934 Strathern St., Van Nuys, Calif.

For more details circle **NED-627 F8** on enclosed inquiry slip

STEP SWITCH
has optional rotary tap switch

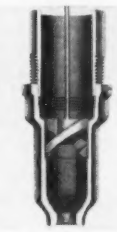


From 2 to 20 independent 10-amp circuits are available in the MT Series heavy duty step switch. It is driven by a rotary alternating current solenoid at speeds up to 300 steps per minute. Up to 16 steps per cycle are available with each circuit closed for one or more steps, depending upon the cam breakouts. An optional interrupter circuit advances the switch to "home position" or for other control functions. Two frame sizes accommodate from 2 to 12 or 13 to 20 total circuits. Over-all lengths are 8 7/8 and 12 3/8 in., height is 7 in., and depth is 4 3/8 in. Addition of an optional rotary tap switch increases the number of circuits to 36. Tap switch points may be used for pilot circuits such as lights and relay coils which are energized sequentially. Made by **Eagle Signal Corp.**, Dept. NED, 202 20th St., Moline, Ill.

For more details circle **NED-628 F8** on enclosed inquiry slip

SPRAY NOZZLES ...THAT FIT INSTALLATION NEEDS

LIMITED SPACE? Here's a pneumatic atomizing nozzle no bigger than a half dollar.

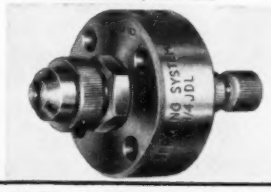


NOZZLES INACCESSABLE? Vane of this FullJet nozzle is withdrawn through pipe for easy, remote cleaning.

SIMPLIFIED WALL MOUNTING? Nozzle body acts as flange . . . fits any wall thickness. Perfect for pressurized chambers. →

Spraying Systems gives you better spray nozzle performance . . . plus a wide choice of physical nozzle shapes, sizes and assemblies. Shown here are three such typical nozzles. When the spray nozzle problem also includes installation and maintenance, perhaps we already have an easy solution. For information write for Catalog 24.

SPRAYING SYSTEMS CO.
3211 RANDOLPH STREET
BELLWOOD, ILLINOIS



For more details circle **NED-629 F8** on enclosed inquiry slip

SPRAY PAINTING MASKS
A competent engineering staff will counsel with you on the most efficient technique for handling your particular requirements.

CLAMPS AND FIXTURES
Positive pressure and exact registration of the part in the mask. Reduce rejects. Free both hands for productive movements.

CUT FINISHING COSTS THROUGH INCREASED PRODUCTION

PRODUCT DEVELOPMENTS BY CM CONFORMING MATRIX

AUTOMATIC MACHINES
Increase production hundreds to one over hand methods. Reduce labor costs. Eliminate need of experienced workmen.

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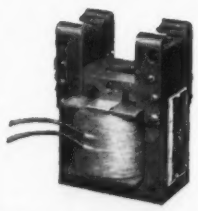
MASK WASHING MACHINES
50% faster than any other make. Cut solvent consumption. Avert production delays due to damaging of masks by hand scrubbing.

CONFORMING MATRIX CORPORATION
338 Toledo Factories Building Toledo 2, Ohio

For more details circle **NED-630 F8** on enclosed inquiry slip

SOLENOIDS

G-211 solenoid, 10 lbs. at 85% voltage, 1 1/2" stroke.



NA-726 solenoid; 16 lbs. at 1" stroke, 100% voltage.

G-200 line of solenoids. Replacement for all sizes of General Electric Co.'s CR-9503-200 line of solenoids.

NA-700 line of solenoids, replacement for National Acme solenoids, size for size, for all modifications.

The solenoids of both the above replacement lines are all thoroughbred Trombetta solenoids. All dimensions of interest to the user are the same as the respective solenoids they replace. The pull and pull characteristics are identical. In either case, we are in a position to furnish replacement units for any and all modifications. They are available for all voltages and frequencies, including direct current.

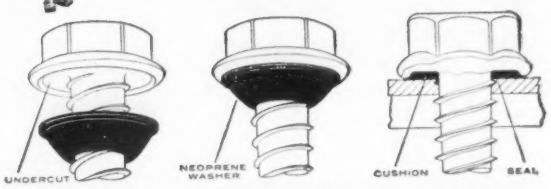
See our catalogs in Sweet's Catalog Service. Ask for more information.

TROMBETTA SOLENOID CORP.
329 N. MILWAUKEE STREET • MILWAUKEE 2, WISCONSIN

For more details circle **NED-631 F8** on enclosed inquiry slip

For better products

LEAKPROOF...CUSHIONED TUFF-TITE FASTENERS



Undercut of Tuff-Tite fastener head . . . . . confines and controls flow of conical neoprene washer . . . so washer seals the hole and cushions the fastener head!

Now you can • prevent leaks at fastener holes • protect fine finishes from fastener damage • stop vibration noises and squeaks

Leakproof, non-marring, shock and squeak absorbing! If you need these fastening advantages, you need National Tuff-Tite fasteners.

Standard National Tuff-Tite fasteners are available in hexagonal, pan, round and truss head styles for screw diameters No. 6 to 3/8" inclusive . . . maximum over-all length 1 1/2". Standard fastener types are wood screws, self-tapping screws, thread cutting screws, machine screws and stove bolts. Tuff-Tite fasteners are pre-assembled with neoprene washers.

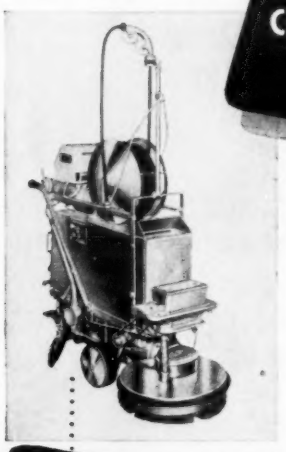
Washers are molded of neoprene which has a durometer hardness of 85 to 95. *Write for the Tuff-Tite fastener folder describing this line in detail.*

National

THE NATIONAL SCREW & MFG. COMPANY
CLEVELAND 4, OHIO
Pacific Coast: National Screw & Mfg. Co. of Cal.
3423 South Garfield Ave., Los Angeles 22, Cal.

▲ For more details circle NED-632 F8 on enclosed inquiry slip ▲

Self-Propelled SCRUBBER-VAC... .... CUTS CLEANING TIME 2/3!



For **Small-Area Factories (2,000 to 15,000 sq. ft. of floor)**

Finnell's 418P Electric Combination Scrubber-Vac, with its 18" brush spread, cleans floors in about *one-third the time* required with a conventional 18" machine and separate vac. Also can be used for polishing, etc. Available on lease or purchase plan. (Powder Dispenser is an accessory.)

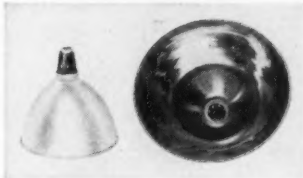
Applies cleanser, scrubs, and picks up — in ONE operation!

FIND OUT WHAT YOU WOULD SAVE . . . with a *Finnell Scrubber-Vac. Finnell* makes a full range of sizes, and *gasoline* or *propane* as well as *electric* models. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 5506 East Street, Elkhart, Indiana.

FINNELL SYSTEM, INC.
Originators of Power Scrubbing and Polishing Machines
FINNELL
BRANCHES IN ALL PRINCIPAL CITIES

▲ For more details circle NED-633 F8 on enclosed inquiry slip ▲

INDUSTRIAL LIGHTING UNITS
use incandescent or mercury lamps



Both incandescent and mercury vapor lamps are provided in line of Brascolite industrial lighting units for low-bay, high-bay, and special lighting applications. All units are formed of aluminum and processed Alzak for optimum light control and easy maintenance. Line provides low bay units; glass Alzak diffusers; deep bowls; 30, 60, and 90-degree beam high bay units; as well as mercury vapor high bay units. Ventilated, black-top socket covers are furnished on all 100 per cent down-light reflector units. Luminaires with 15 per cent up-light are also available. Made by **Edwin F. Guth Co.**, 2603 Washington Blvd., St. Louis 3, Mo.

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LENS CLEANING TISSUE
200-sheet box for goggles, glasses

Lint-free, absorbent, and strong K - Lens - M lens cleaning tissues are now offered in a desk-size box containing 200 sheets. They are interfolded and fed one at a time through an opening for the cleaning of goggles and glasses. Both glass and plastic lenses can be cleaned. No film, haze, or streaking results from their use. Made by **Wilkins Co.**, Cortland 32, N. Y.

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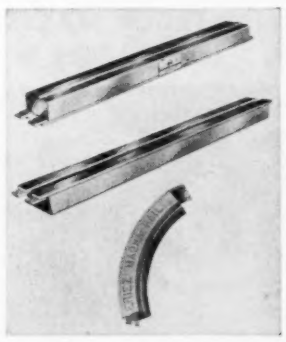
CONVEYOR MAGNET RAILS
aluminum covers prevent pilferage



Ordinary belt conveyors are transformed into permanent magnetic conveyor-or-elevators with enclosed Magna-Rail components. Extruded aluminum covers lend strength and rigidity to the components, are modern in appearance, and guard against tampering or pilferage of magnetic elements. Magna-Rails allow such items as tin cans, sheets, nails, assemblies, and ferrous parts to be handled at increased speeds because of holding action of magnetic field working through the moving belt. Inclines as steep as 90 degrees can be negotiated, and conveyed items are gently released at different levels by means of curved transition section. Made by **Eriez Mfg. Co.**, 1325 E. 12th St., Erie 6, Pa.

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for increased production . . . minimum down-time . . . lower costs . . . specify SP

AIR and HYDRAULIC CYLINDERS

SERIES A
200 psi air, up to 500 psi oil or water, 23 mounting types. Precision-honed brass tube.

• floating cushions, uniform cushioning, fully adjustable
• cartridge-type rod seals, integral rod wiper
• choice of rod sizes, rod heat-treated and hard chrome plated
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• all ferrous parts rust-proofed

SERIES H
2,000 psi hydraulic. Full range of mounting types. Precision-honed seamless steel tube.

Representatives in principal cities. Phone or write for Catalogs No. 110B (Series A) and No. 104A (Series H)

SP *for speed and performance*
THE S-P MANUFACTURING CORPORATION
SOLON, OHIO

NON-ROTATING AIR AND HYDRAULIC CYLINDERS • ROTATING AIR AND HYDRAULIC CYLINDERS • POWER CHUCKS • COLLET AND DRILL PRESS CHUCKS • VALVES, ACCESSORIES
A BASSETT COMPANY • IN GREATER CLEVELAND • ESTABLISHED 1916
AA-7484

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Field-proven design and quality construction are expertly combined in every Freeway unit, to give you positive anti-friction protection . . . for just pennies per bearing. So if your application calls for low RPM operation and the shaft does not exceed 1" . . . it will pay you to investigate Freeway in terms of your own specific needs. Omega-Type bearings are made right, priced right . . . and delivered "on time" regardless of the quantity required. Send for your catalog today!

Freeway washers and stampings also reflect the highest manufacturing standards . . . at the lowest cost. Mail the coupon below.

Gentlemen: I'm interested in Omega bearings. Rush me a catalog at once. In addition, tell me more about ( ) washers, and ( ) stampings.

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City.....Zone.....State.....

Signature.....

Freeway

WASHER & STAMPING COMPANY
P. O. Box 1756, Cleveland 5, Ohio

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Now Cutler-Hammer Presents ULTRAFLEX . . . the Spectacular

STATIC POWER Adjustable Speed Packaged Drives

No moving parts! Light, compact static power conversion components have replaced the conventional m-g set resulting in outstanding savings in installation, operation, and maintenance. Ultraflex Packaged Drives save up to 50% in valuable floor area . . . up to 75% in weight. Ultraflex Packaged Drives guarantee greater operational efficiencies, ultra-responsive speed control and ultra-precise speed regulation. With static power conversion systems there are no bearings, commutators, or brushes to service. There are no shafts to align, no couplings to maintain, no inertia loads to balance. Ultraflex Packaged Drives are noise and vibration free . . . require no forced ventilation cooling. Available in two forms . . . Ultraflex E—the 1 to 40 hp, low cost electronic type and Ultraflex M—the 1 to 200 hp, ultra-efficient magnetic amplifier type. Write today on your company letterhead for new descriptive bulletins EN64-Ultraflex E and EN65-Ultraflex M. CUTLER-HAMMER Inc., 1377 St. Paul Ave., Milwaukee 1, Wis.

CUTLER-HAMMER CONTROL C-H

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FOR PROCESS & POWER INSTRUMENTATION

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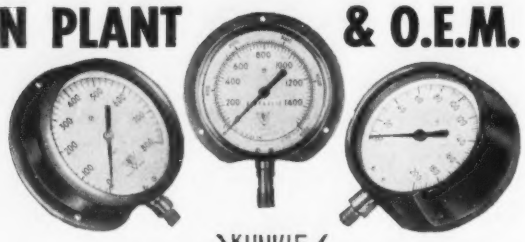

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Complete, broad range line makes gauge application-specification easy with assured results backed by 50 years of gauge manufacturing experience.

Ranges from 15 p.s.i., or 30" of vacuum, to 20,000 p.s.i.

Bourdon tubes of bronze, drawn or bored s/s, and other alloys

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In Sizes And Shapes To Do Your Brazing Job Better

1 NOTCH COIL RINGS — No Tangling Problems
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10 DAY DELIVERY ANY WIRE SIZE — STRIP TO .006 THICK

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LUCAS MILHAUPT Engineering COMPANY

5070 South Lake Drive, Cudahy, Wis.

For more details circle NED-641 F8 on enclosed inquiry slip

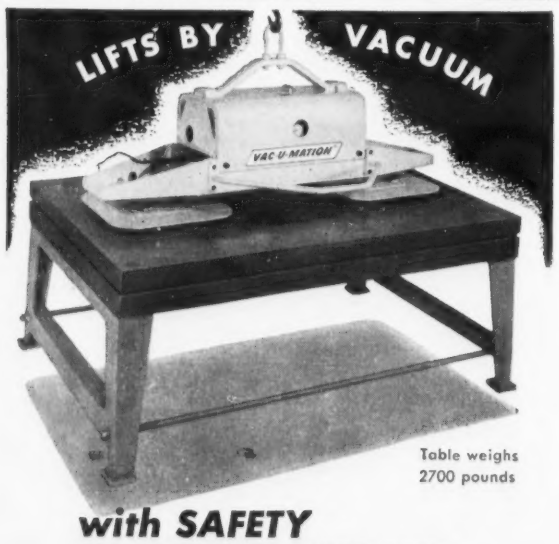


Table weighs 2700 pounds

with SAFETY and ECONOMY

VAC-U-MATION SHEET LIFTERS shorten man-hours, cut handling costs, pay for themselves F-A-S-T. Models available from manually-operated units to completely automatic models with capacities for handling up to 2,000 lbs.

4582

Write for NEW Catalog!

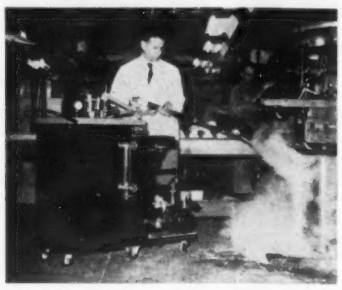
VAC-U-MATION DIVISION

4169 Ravenswood Avenue, Chicago 13, Ill.

District Offices: Detroit and Cleveland

For more details circle NED-642 F8 on enclosed inquiry slip

STEAM CLEANER for indoor cleaning uses



Grease, dirt, and other foreign matter can be removed from machinery, equipment, and factory work surfaces by the electric Hot Shot steam cleaner. Designed for indoor use, it requires only the flick of a switch to produce a steady flow of hot, dry steam, with or without a detergent. Steam volume is fingertip-controlled. The ASME-approved unit is available in three portable and stationary sizes. Made by **Automatic Steam Products Corp.**, Dept. H, 140 W. 31st St., New York 1, N. Y.

For more details circle NED-643 F8 on enclosed inquiry slip

SILICON POWER RECTIFIER continuous rating is 20 amp dc

Four of these diffused junction silicon power rectifiers in a full wave bridge circuit will provide power for a 10-hp, 230-v dc motor. The small unit is rated for continuous service at 20 amp dc at maximum peak reverse potentials up to 400 v. It is suited for direct current power supply and magnetic amplifier applications in ambient temperatures up to 150° C. Forward resistance is very low and reverse resistance is extremely high. Made by **Fansteel Metallurgical Corp.**, 2208 Sheridan Rd., North Chicago, Ill.

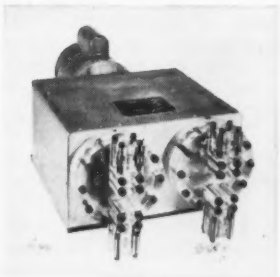
For more details circle NED-644 F8 on enclosed inquiry slip

LIFT TRUCK MASTS in total lifts to 216 in.

Added to line of attachments for cushion and pneumatic tire lift trucks in the 3000 to 5000 - lb classifications is the Tri-Lift mast. Eleven basic mast sizes include the three standard sizes with total lifts of 144, 180, and 216 in. Overall lowered heights of 71, 83, and 96 in. respectively, permit trucks to work in enclosed trailers, box cars, or to stack to extra heights, if necessary. Mast features simple "Block-n-Tackle" arrangement to give added heights. Forward visibility is improved. Made by **Allis-Chalmers Mfg. Co.**, Engine-Material Handling Div., 918 S. 70th St., Milwaukee 1, Wis.

For more details circle NED-645 F8 on enclosed inquiry slip

CORROSIVE FLUID PUMPS offered in simplex, duplex models



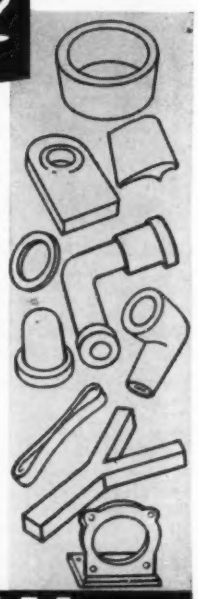
Suction lifts up to 20 ft with standard pressures of 50 psi (higher for special applications) are featured by the Demlon pump for corrosive fluids. Available in simplex and duplex models, it is essentially a piston pump, but has a barrier diaphragm separating the working parts from the fluid handled. All surfaces which contact corrosive media are of Kel-F or Teflon. Other materials which can be used for heads and valves include stainless steels, Hastelloys, rigid polyvinyl chloride, Uscolite, and titanium. Diaphragm materials are Kel-F elastomer, Hypalon, Hycar, and neoprene. Pumps, equipped with NEMA standard Type C end-mounted motors of various constructions, can be used for metering single solutions or mixing and metering. A variable speed drive can be attached to either model. Made by **Keystone Engineering Co.**, Dept. NED, Box 14366, Houston 21, Tex.

For more details circle NED-646 F8 on enclosed inquiry slip

Silicone RUBBER PARTS

may be your most efficient, most economical way to:

★ REDUCE FABRICATING COSTS
★ MEET "TOUGH" SPECIFICATIONS
★ IMPROVE PRODUCT QUALITY



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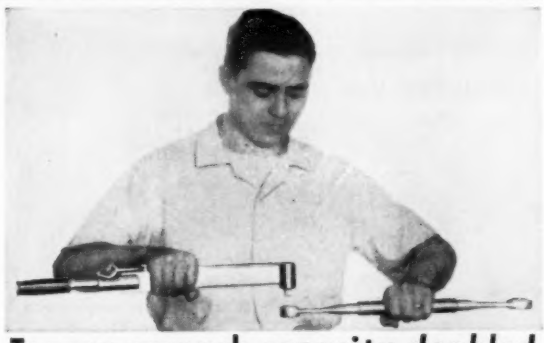
16-page booklet with data insert on Silicone Rubber, tells how this amazing material solves parts problems for manufacturers of many types of products. . . . Contains complete details on Colonial's fast, efficient rubber compounding and molding. Write to:

4-10-9

COLONIAL RUBBER COMPANY

Ravenna, Ohio

For more details circle NED-647 F8 on enclosed inquiry slip



Torque-wrench capacity doubled with new OTC e-x-t-e-n-s-i-o-n-s

Twice the torque with the same pull — because new OTC extensions double the effective length of the torque wrench. Extension snaps onto torque-wrench drive square . . . add the end you need from complete OTC selection — box-end wrenches (right) ¾" to 3½", ratchet and fixed drives in ¾, 1 and 1½ inch square drives, 15° and double-offset box wrenches.

See your OTC distributor or write

OWATONNA TOOL CO.

436 Cedar Street Owatonna, Minnesota

For more details circle NED-648 F8 on enclosed inquiry slip

- Lowest Price (for capacity and size)
- 500 to 5000 lbs. capacity
- One Container for Every Job
- Dimensions 40" x 48" x 24"

For full information write for Bulletin C-2

CARGOTAINER DIVISION / TRI-STATE ENGINEERING COMPANY

315 W. Beau Street

Washington, Pennsylvania

CARGOTAINERS · CONVEYOR GUARD · PALLETS

For more details circle NED-649 F8 on enclosed inquiry slip

Hundreds of machines available that were designed for special industry applications.

Let us know your problem. We'll be happy to submit recommendation.

Illustrated is a topside or underside coating machine for applying resins, varnish, glues, lacquer, etc. to webs or sheets of paper up to 21"

If your problem is high speed coating of paint, varnish, glue, latex, etc. —POTDEVIN's sixty years of specialization in coating equipment can quickly help you solve it . . . guaranteeing initial low cost and top efficiency.

ESTABLISHED IN 1893 POTDEVIN

POTDEVIN MACHINE CO.
273 North Street • Teterboro, N. J.

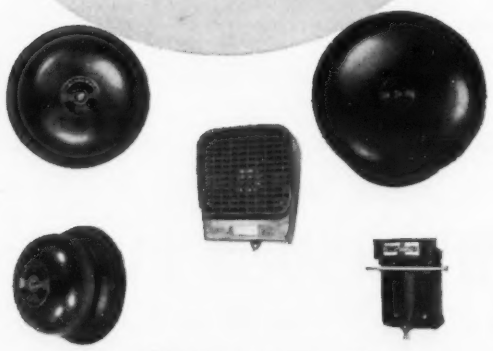
Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling

▲ For more details circle **NED-650 F8** on enclosed inquiry slip ▲

bells . . . horns
chimes
cow gongs

Wheelock SIGNALS

complete line of quality audible signals



gives you one source of supply for any signal

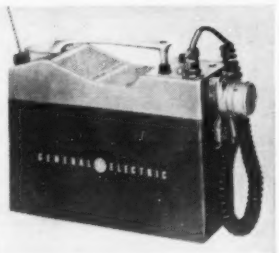
Vibrating bells, ranging from 2½ inches to 20 inches, incorporate Wheelock Signals' original Underdome type operation. Such advanced designs and styles are represented in our entire line of audible signals: explosion proof bells, musical and soft tone signals, chimes, cow gongs, tapsounders and buzzers, horns and whistles.

Wheelock Signals' new brochure just issued, shows complete photos, descriptions, diagrams and specifications of these audible signals. For your copy, write on your letterhead . . . ask for Bulletin No. 5C.

Wheelock SIGNALS INC
LONG BRANCH, N. J.

▲ For more details circle **NED-651 F8** on enclosed inquiry slip ▲

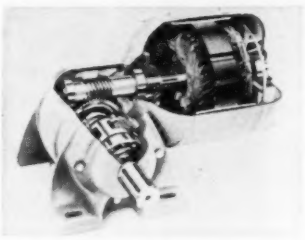
PORTABLE TWO-WAY RADIO
receiver completely transistorized



A completely transistorized receiver is featured by this portable two-way radio, well suited for material handling uses. G-E transistor No. 3N36, for frequencies up to 100 mc, is used in the 25-54 mc low-band portable, whereas units designed for high-band (144-174 mc) are equipped with No. 3N37 transistor for up to 200 mc. Sensitivity of equipment is 0.4 mu v. Receiver, standing by to receive message, drains less power than a small household flashlight. Modular construction of transmitter facilitates removing various stages for replacement. Transistors are plug-in type. Made by **General Electric Co.**, Box 1122, Electronics Park, Syracuse 1, N. Y.

▲ For more details circle **NED-652 F8** on enclosed inquiry slip ▲

DOUBLE-REDUCTION GEARMOTORS
combination single-planetary type



Heat treated aluminum alloy frame contributes to the lightweight and rapid heat dissipation of this series of combination single planetary gearmotors. Insulation is Glamicone, a gloss-Mylar-silicone combination. The double reduction worm and planetary units are available in foot or ring-mounted frames, ¼ to 1 hp, 38 to 3 rpm. A ½-hp unit at 14.5 rpm delivers 1260 lb-in. torque output, yet measures only 14⅝ in. long and 13 15/16 in. wide. Motor and worm shaft are joined by a tang coupling to facilitate assembly and disassembly without disturbing gears or driven mechanism. Planets turn on needle bearings. Made by **Electra Motors, Inc.**, 1108 Lemon St., Anaheim, Calif.

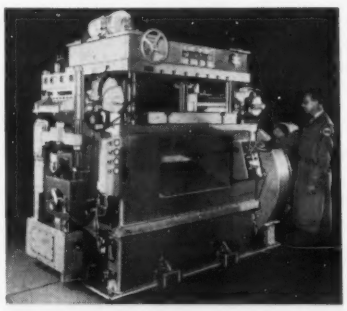
▲ For more details circle **NED-653 F8** on enclosed inquiry slip ▲

SUMP PUMP MOTOR
bronze-cased unit has aluminum parts

Replacing the former stainless steel cased design, this Series 350 Submatic sump pump motor has a bronze case and aluminum internal parts. Case serves as the switch-actuating float of an assembled cellar drainer. Pump and motor operate in and under water, and can be installed below floor level in a sump, pit, or tank. Unit features external adjustment for float-case position, set-type switch which is unaffected by handling, and handle-to-pump-casting connection to minimize stress on moving parts. Made by **Franklin Electric Co.**, 346 E. Spring St., Bluffton, Ind.

▲ For more details circle **NED-654 F8** on enclosed inquiry slip ▲

100-TON DIEING MACHINE
double-crank type takes coil, sheet



High speed operation, accurate alignment, low center of gravity, and a pulling stroke are characteristics of the underdrive system built into the Henry & Wright 100-ton automatic dieing machine. A double-crank arrangement supports the upper cross-head at both ends, resulting in rigidity and strength against off-center loading. A neoprene-cork-neoprene sandwich type dampener gasket separates the upper and lower bases to minimize vibration transmitted to the floor. Coil or sheet metal is fed through roll feeds into a series of progressive die stations where piercing, blanking, forming, and other operations are performed with each stroke. Made by **Hydraulic Press Mfg. Co.**, 1052 Marion Rd., Mt. Gilead, Ohio.

▲ For more details circle **NED-655 F8** on enclosed inquiry slip ▲

Patent No. 2,722,372.
Other Patents Pending.

Quickdraft
THE WORLD'S MOST EFFICIENT POWER EXHAUSTER FOR INDUSTRY

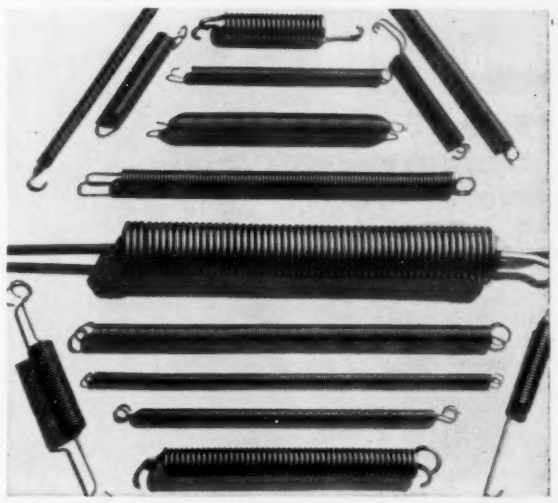
★ STATIC PRESSURE UP TO 20 INCHES
★ NO MOTORS OR FANS IN EXHAUST LINE
★ NEEDS NO STACKS
★ ACID RESISTING FINISHES

IMPORTANT NOTICE
For withstanding corrosive gases, all Quickdraft units are available in standard acid resisting vitreous enamel, No. 316 Stainless Steel, rigid plastics (P.V.C.), and with plastic and Fiberglas coatings.

Quickdraft provides up to 20-inches static pressure for **exhausting** paint spray, abrasives, corrosive gases, noxious fumes and high temperatures . . . **moving** grains, powders, salts and trimmings . . . **recovering** metallic waste from foundry stacks. It reduces maintenance costs . . . eliminates down-time for cleaning and replacing fan blades. In addition, it vents incinerators, heating plants and water heaters . . . providing constant draft for efficient and economical combustion. Write for engineering data on your application, today.

Quickdraft CORPORATION
P. O. Box 87-L
Dueber Hampden Building
Canton 1, Ohio

▲ For more details circle **NED-656 F8** on enclosed inquiry slip ▲



Extension Springs

All types and sizes custom made to meet your performance requirements. Wide range of end coil treatment, hooks and loops. Also swivel end and drawbar types. Precision made to hold dimensions and load carrying capacity. Send for pamphlet "Spring Design and Selection—in brief."

Associated Spring Corporation
General Offices
Bristol, Connecticut

5821

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NAMES IN THE NEWS!

Jupiter! Redstone!

Missile Development Centers are among the largest Government Defense users of Produc-Trol for research, production, manpower and other types of scheduling.

PRODUC-TROL Visual Control
not only schedules, But automatically checks with TIME, LINE and COLOR control

- Original cost and upkeep low.
- Schedules and time checks operations.
- Historical record to back it up.
- Bad situations show automatically.
- Its simplicity has put it into world-wide use.
- Analyze 100 items in 10 seconds.

Creator of Effective Tools for Effective Management

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WASSELL ORGANIZATION, INC.
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Please send Free Booklet on Produc-Trol. NED
NAME ..... COMPANY .....
ADDRESS .....
CITY ..... STATE .....

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DOUBLE ACTING ONE-PIECE ALLIS PISTON CUPS

This is a combined piston and cup packing unit. Simple, extremely economical, it serves the same purpose as far more complicated and expensive pistons. Easy to install, downtime is held to minimum, cannot be installed backwards. Design simplicity means fewer inventory of parts. Gives long life, dependable service. Made of specially compounded rubber bonded to solid metal disc.

SINCE 1899 SEND FOR FREE BULLETIN 108

CHICAGO-ALLIS MFG. CORP.
Producers of CHICAGO BELTING • ALLIS RUBBER • ALLIS SEAL Products
130 NORTH GREEN STREET • CHICAGO 7, ILL.

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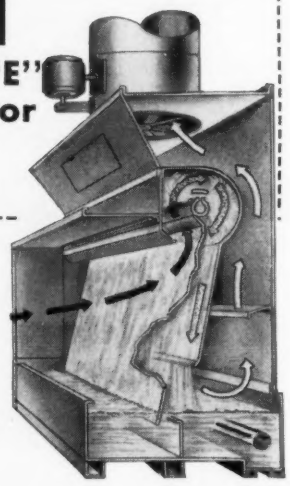
What's New

Binks Style "E" Dynaprecipitor Water Wash Spray Booth



Removable manifold. Entire manifold removes in seconds—without tools!

Hinged water curtain. Swings up for easy skimming of entire collecting pan.

Complete water circulation. No dead ends to accumulate sediment.

For complete information ask your Binks industrial distributor for Bulletin DUE or write direct to the address below.

7088

Binks EVERYTHING FOR SPRAY PAINTING

Binks Manufacturing Co.
3122-34 West Carroll Avenue
Chicago 12, Illinois

REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

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TWO NEW MINIATURE GRIPCO FASTENERS

FOR
- **Hard to reach assemblies**
- **Thin metal applications**
- **Automatic feeding**
- **LOW COST fasteners**

Gripco Miniature Pilot Weld and Clinch Nuts, with or without the famous Gripco locking feature, provide low cost fastenings in blind assemblies or as extra threading depth for thin metals. Miniature size ideal where space is limited. Sizes #4 through ¼" in Miniature Series, fine and coarse threads. Sizes ¼" through ⅝" are available in standard dimensions.

Large inventories carried for immediate shipment. Brass and Aluminum made to special order.

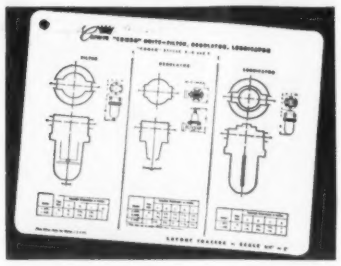
Write for samples and full details.

GRIP NUT COMPANY
106 Maple Avenue
South Whitley, Indiana

620

▲ For more details circle NED-662 F8 on enclosed inquiry slip ▲

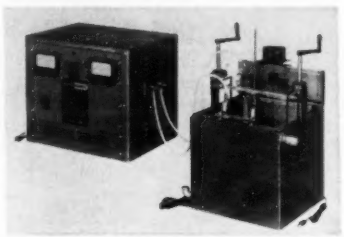
LAYOUT TRACERS
outline filters, regulators



Layout Tracers which outline various filters, regulators, lubricators, and accessories in the Crown line, make it easy for draftsmen to "lay in" these units as required. Outlines are shown to scales of ⅛, ¼, and ½ in. to 1 in. on permanent cards which the draftsman slips under his tracing. There are 8 cards (16 sides) in a set in an envelope with directions for use printed on the outside. Offered free by **Hannifin Co.**, 528 S. Wolf Rd., Des Plaines, Ill.

▲ For more details circle NED-663 F8 on enclosed inquiry slip ▲

CHROME PLATING UNIT
includes 75-amp rectifier



Tools and dies, and various types of worn steel, cast iron, or nonferrous metal parts can be chrome plated with the Model A, No. 75 Chromplater. The packaged unit prolongs cutting tool life, salvages worn parts, plates friction parts against wear, and offers protection against rust and corrosion. From 0.0001 to 0.010 in. of hard chrome is deposited by the unit which consists of 75-amp rectifier, water-jacketed lead plating tank, thermostatically-controlled electric heating unit, work platform with elevating apparatus, exhaust intake hood, electric blower, thermometer, and hydrometer. Two gallons of the plating solution concentrate (furnished) make 8 gallons of plating solution. Field engineering service for plating problems is available. Made by **Dawson Corp.**, Chrom Div., 302 Fifth Ave., Pelham, N. Y.

▲ For more details circle NED-664 F8 on enclosed inquiry slip ▲

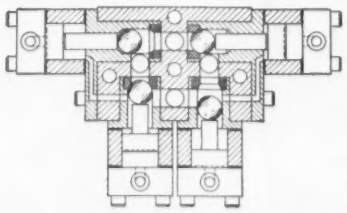
FASTENER DRIVE TOOL
installs narrow wiring channels

Model T-25H fastener drive tool is designed for the installation of narrow wiring channels, including Wiremold, National, and other raceway types. Fastenings can be made into concrete, masonry, brick, composition block, and steel without predrilling or plugging. Drive tool of hardened nickel-steel alloy has a steel drive ram and a molded safety hand grip. Tool is used by holding against a surface and striking with a hammer. Conic fasteners used with the tool are rustproofed and available in pins, studs (¼-in.-20 and 8-32 threaded), and drive-ring types, in lengths up to 4 in. Made by **Hilti Rapid Fastening Systems, Inc.**, Dept. A, 55 Vandam St., New York 13, N. Y.

▲ For more details circle NED-665 F8 on enclosed inquiry slip ▲

FOUR-WAY HYDRAULIC VALVE
ball-type used with any fluid

Used with any fluid, regardless of viscosity or lubrication qualities, this four-way hydraulic valve can be repaired without removing it from the hydraulic circuit. It incorporates four steel balls, each of which is pressed against its hardened steel seat by individual cylinder action. Piston area in each cylinder is twice the contact seat area of the ball. When shock pressure behind any ball exceeds twice the line pressure, ball will be unseated to permit the fluid to escape to drain. Hydraulic cushion action absorbs any shock. Valves can be used as either two-position or three-position units. Made by **Almar Hydraulic Valve Co.**, 10021 Meech Ave., Cleveland 5, Ohio.



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SILVER PLATING
"ON THE JOB" WITH POWDER

Cool-Amp Silver Plating Powder deposits a genuine coat of silver that will not peel off, and will provide lasting protection against oxidation. It has been used extensively and is accepted as equal to electroplating for bolted and stationary contacts.

Reduces Maintenance
Saves Electricity

Cool-Amp minimizes overheating and provides cool maximum conductivity for your copper, brass or bronze contacts. Used on all current carrying connections, Cool-Amp silver plating assures long life and low maintenance and will prevent series of losses from oxidation that are too small to create noticeable heat but still accumulate into major power loss. Apply to fuse clips and blades to reduce overheating.

Cool-Amp contains no cyanide and is simple to apply. It can be used by any number of people at the same time ON THE JOB in underground vaults, sub-stations and hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

One pound will silver plate approximately 6,000 square inches.

$13.50 PER POUND **SHIPPED PREPAID**
WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS

The COOL-AMP Co.
Dept. ED. 8603 S.W. 17th Avenue, Portland 19, Oregon

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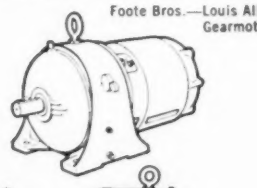
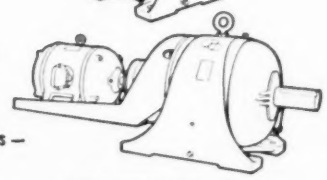
FOOTE BROS.
Better Power Transmission Through Better Gears

MOTORIZED DRIVES



Foote Bros.—Louis Allis Gearmotor

- **Gearmotors in sizes 1 to 150 HP Single, Double, Triple Reductions**
- **LINE-O-MOTOR Drives — 1 to 75 HP Double, Triple Reductions**



LINE-O-MOTOR DRIVE

Foote Bros.—Louis Allis Gearmotors are available in over 3500 types and sizes, with output speeds from 780 to 7.5 RPM.; Foot, Flange, or Extended Bearing Flange mountings.

LINE-O-MOTOR Drives permit you to use your own NEMA frame motor, or specify the type you prefer. Ratios from 5 to 1 through 238 to 1.

GEARMOTORS and LINE-O-MOTOR Drives incorporate famous Foote Bros. DUTI-RATED Gearing for high capacity, smooth operation, long life.

84 page Bulletin MRA has complete details and selection data on Foote Bros. Motorized Drives. *Write for it today.*

FOOTE BROS. GEAR AND MACHINE CORPORATION
4569 South Western Boulevard • Chicago 9, Illinois

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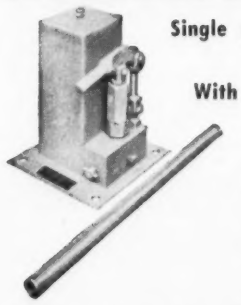
HAND
HYDRAULIC PUMP



Single and Double Designs to 20,000 Psi
With or Without Reservoir

160 Cubic Inch Reservoir with 8" x 8" Base Plate. Optional Size Piston: ⅜", ½", ¾", 1". Handle length: 18 inches. Catalog No. 160

We specialize in hand pump units to operate in temperatures from minus 65F to plus 160 F and with any capacity reservoirs required.

The single pump with ½", ¾", 1" or 1½" piston now available in stainless steel.

WILLIAM S. PINE
Hydraulic Hand Pumps for 1001 Uses
1635 E. 22nd St., Los Angeles 11, Calif.

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Valves turn easier with Silicone VALVE SEAL

Plug valves, control valves, flow meter bearings, pump packings, plug cocks—all function more efficiently and with less maintenance when lubricated with Dow Corning Valve Seal.

A nonmelting, grease-like silicone compound, Valve Seal retains its lubricating effectiveness at temperatures from −40° to 500°F. Resists moisture, oxidation, many chemicals and gases. Eliminates the need for stocking a variety of special purpose valve lubricants.

Send for FREE SAMPLE and full information.

First in Silicones

DOW CORNING SILICONES

DOW CORNING CORPORATION
MIDLAND, MICHIGAN

DEPT. 546

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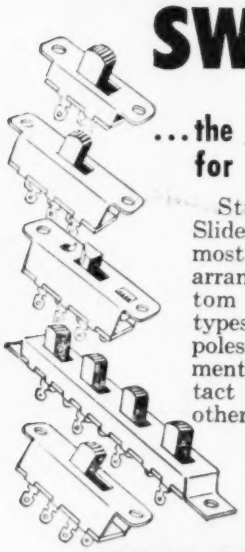
LOW-COST SWITCHES



...the most complete line for electrical products

Sturdy little Stackpole Slide Switches provide almost any desired switching arrangement — at rock bottom cost. U.L. approved types up to 3 amps., 1 to 3 poles; up to 4 positions; momentary or maintained contact designs . . . and many other features.

WRITE FOR SLIDE SWITCH BULLETIN RC-11D

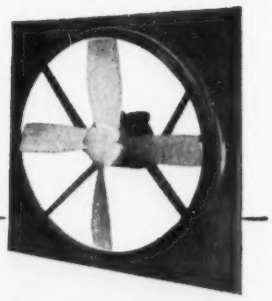
STACKPOLE

Electronic Components Division

STACKPOLE CARBON CO., St. Marys, Pa.

▲ For more details circle NED-671 F8 on enclosed inquiry slip ▲

New fan combines power with quietness



R&M HUNTER

Write for literature and prices on the new R&M-Hunter heavy-duty "Q" Type Fans. Certified air deliveries from 2900 to 10800 CFM. Features include: a totally enclosed single-phase, permanent split capacitor motor; one-piece cast aluminum propeller in modern airfoil design; easily installed heavy steel frame with high-efficiency entrance ring.

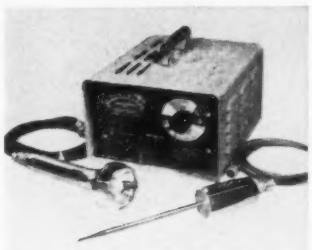
HUNTER DIVISION - ROBBINS & MYERS, INC.
2634 Frisco Ave., Memphis, Tenn.

R & M-Hunter "Q" Type Fan

Backed by 75 years' experience

▲ For more details circle NED-672 F8 on enclosed inquiry slip ▲

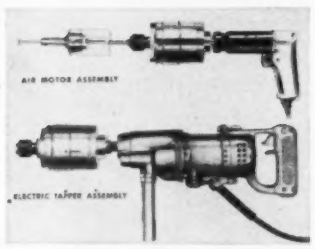
VIBRATION ANALYZER
troubleshoots machine tools, motors



A vibration analyzer, a portable in-place balancer, and a system to monitor vibration in machinery comprise Model 311 vibration analyzing equipment intended for use on machine tools, motors, power transmission systems, fans, pumps, and generators. Other components include a velocity-type vibration pickup and a stroboscopic lamp. Meter presents the peak-to-peak displacement in 10-mils, 1-mil, and 0.1-mil ranges. Variable frequency filter allows separate analysis of each frequency from 500 to 5000 cpm. Instrument is housed in carrying case and features printed circuitry with plug-in model construction. Made by **International Research & Development Corp.**, Box 55, Worthington, Ohio.

▲ For more details circle NED-673 F8 on enclosed inquiry slip ▲

TORQUE CONTROL UNIT
for controlled tube rolling



Uniformly rolled tube joints within a tube bundle are assured with use of the Expand-O-Trol, a mechanical self-contained torque control unit. Device measures the tightness of expanded tube joints by utilizing the torque resistance of the expanding tube. Danger of tube sheet warpage is minimized. Unit has a slip-clutch with friction wear compensating arrangement. When desired torque is reached, metallic-embedded fiber disc slips against mating steel hub, stopping expansion. Unit adapts to any air or electric tube-rolling motor. Assemblies shown are for ¼ through ¾-in. OD light to heavy wall ferrous and nonferrous tube. Unit develops up to 25 lb-ft torque. Made by **Gustav Wiedeke Co.**, 1833-E Richard St., Dayton 1, Ohio.

▲ For more details circle NED-674 F8 on enclosed inquiry slip ▲

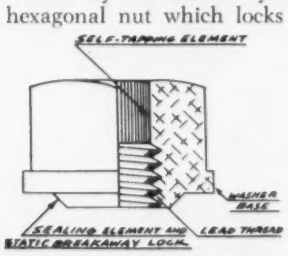
TELEVISION CAMERAS
have no separate control power unit

Weighing from 13 to 15 lb, three TE-6-A closed circuit television cameras operate without separate control power units or bulky cable connections. They measure 7 13/16 x 12⅜ x 5⅛ in. and have easily accessible wired-in chassis components. Regulated vidicon focus gives resolution exceeding 300 lines with voltage changes from 100 to 130 v. Crystal-controlled RF frequency minimizes tuning readjustments, and a basic control panel can be located remotely up to 1000 ft. Accessories permit control at up to 1 mile. Applications include monitoring and control of such operations as materials handling, fire detection, and scrap loading in freight cars. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

▲ For more details circle NED-675 F8 on enclosed inquiry slip ▲

NYLON STOP NUT
locks, seals, and insulates

Locking, sealing, and insulating functions are performed by the Brilok nylon stop nut, a self-tapping hexagonal nut which locks at any position along the screw shank. As screw turns into the resilient nylon, a counter-compressive force is built up, resulting in a tight friction lock. Further tightening causes cone at base of nut to extrude into clearance space, forming a seal against liquid or gas escape. Standard sizes are No. 4, 6, 8, and 10, and ¼, 5/16, ⅜, and ½ in. Half or fully tapped designs are also available. Made by **Byrd Plastics, Inc.**, 2350 W. 12th St., Erie, Pa.



▲ For more details circle NED-676 F8 on enclosed inquiry slip ▲

Does your work concern protective coatings?

FREE

CARBOLINE'S gauge to measure WET film thickness during application of protective coatings

If protective coatings are your responsibility, Carboline has a gift essential in your work.

This precision-ground steel gauge (.0015" tolerance) measures **wet** film thickness **during** application and accurately determines final **dry** thickness. Helps prevent coating failures due to inadequate thickness; helps eliminate need for additional coats after drying period.

Write today on your company letterhead (one per request while our supply lasts).

carboline COMPANY

Manufacturers of PHENOLINE, POLYCLAD, RUSTBOND PRIMERS.

Specialists in Corrosion Resisting Synthetic Materials.

32-J Hanley Industrial St., St. Louis 17

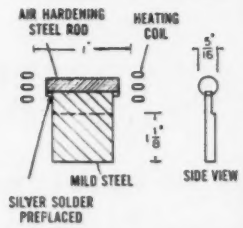
▲ For more details circle NED-677 F8 on enclosed inquiry slip ▲

The Lepel line of induction heating equipment represents the most advanced thought in the field of electronics as well as the most practical and efficient source of heat yet developed for industrial heating.

If you are interested in induction heating you are invited to send samples of the work with specifications. Our engineers will process and return the completed job with full data and recommendations without any cost or obligations.

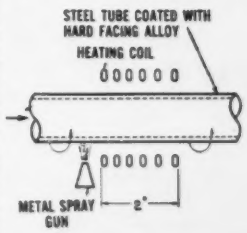
TYPICAL INDUCTION HEATING APPLICATIONS

SIMULTANEOUS HARDENING and BRAZING

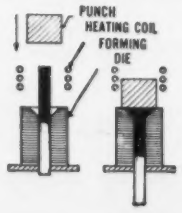


The machined and finished rod of air-hardening steel is simultaneously hardened and brazed to a mild-steel tab. Use of a purified hydrogen atmosphere and a high temperature brazing alloy permits successful hardening of alloy steels without discoloration and scaling even in the absence of flux.

DIFFUSION BONDING OF SPRAYED METAL COATINGS



Corrosion or wear resistant metal coatings sprayed on metal surfaces can be improved by heating to achieve alloying by diffusion. The drawing shows a typical arrangement for processing steel tube sprayed with hard facing alloy. Long tubes may be progressively sprayed and heated.



HEATING HIGH STRENGTH ALLOYS FOR FORMING

Uniform and rapid heating of high strength alloys (alloy steels, titanium, etc.) aids in upsetting and forming operations and also minimizes oxidation and embrittlement.

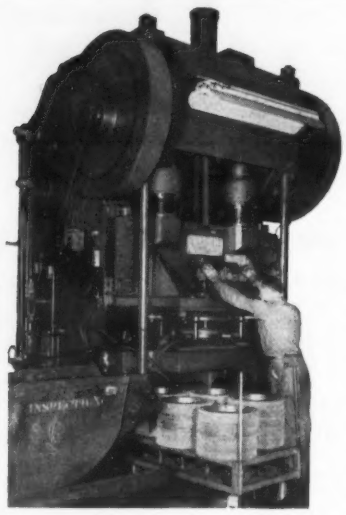
Electronic Tube Generators from 1 kw to 100 kw.
Spark Gap Converters from 2 kw to 30 kw.

WRITE FOR THE NEW LEPEL CATALOG . . . 36 illustrated pages packed with valuable information.

All Lepel equipment is certified to comply with the requirements of the Federal Communications Commission.

LEPEL HIGH FREQUENCY LABORATORIES, INC.
55th STREET and 37th AVENUE, WOODSIDE 77, NEW YORK CITY, N. Y.

▲ For more details circle NED-678 F8 on enclosed inquiry slip ▲



Clutch plates of sizes 11¾" to 22¾" O.D. are made with this 300 ton Steelweld Press.

2000 CLUTCH PLATES PUNCHED PER SHIFT

Many unusual jobs far afield from bending can be done economically on Steelweld Presses built with simple variations to suit requirements. The machine illustrated provides a low-cost method of punching clutch plates of 11 to 13 gauge metal.

Send for free copy of catalog No. 2011

THE CLEVELAND CRANE & ENGINEERING CO.
6637 East 281st St., Wickliffe, Ohio

STEELWELD PRESSES

▲ For more details circle **NED-679 F8** on enclosed inquiry slip ▲

Won't work loose!

Self-locking UNBRAKO socket head cap screws

UNBRAKO self-locking socket head cap screws with Nylok* give you positive locking without lockwashers, cotter pins or wires. The tough, resilient nylon pellet—serviceable from —70 to +250°F—locks these screws securely, seated or not, wherever wrenching stops. They won't work loose. Can be reused. Can be used as adjusting screws. Pellet also acts as liquid seal. Knurled heads give sure finger grip for fast starting. Accurate sockets assure positive, non-slip wrenching. Heat treated alloy steel, controlled fillets, continuous grain flow, fully formed Class 3A threads for maximum strength, exact fit. Standard sizes #0 to 1 in. Also in plated finishes and stainless. Request Bull. 2193. Unbrako Socket Screw Division, STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

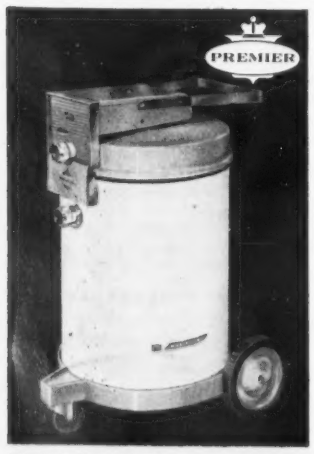
*T.M. Reg. U.S. Pat. Off., The Nylok Corporation

UNBRAKO products are sold through industrial distributors

SPS Jenkintown • Pennsylvania

Standard Pressed Steel Co. • The Cleveland Cap Screw Co. • Columbia Steel Equipment Co., Inc. • Nutt-Shel Corporation • SPS Western • Standco Canada Ltd. • Unbrako Socket Screw Co., Ltd.

▲ For more details circle **NED-680 F8** on enclosed inquiry slip ▲



PREMIER FIRST—BOLD NEW VACUUM CLEANER DESIGN

- New Patented Filter —No. 2814357
- 80% more filter area
- 50% more power
- non-clog design
- 15 gal. *usable* tank capacity

For FREE information on the P-905, the versatile Model 150 Blower and other Premier vacuums and floor machines, fill in and mail this request form. Do it today!

THE PREMIER COMPANY
Dept. 103, 755 Woodlawn Ave., St. Paul 16, Minn.
In Canada: 35 Gerrard St. West, Toronto 2
Attention: Gordon L. Bowman, V.P. & Sales Mgr.
Please rush me FREE details on Premier Industrial Vacuums. Thank you.

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

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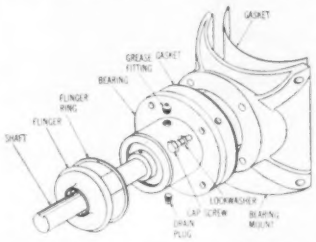
TUBE AXIAL FAN
belt-driven unit for 180° F use

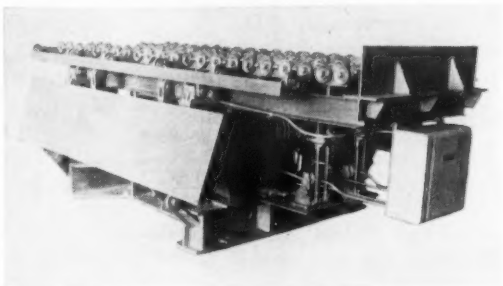
Driving belt and ball bearings of the Power Line BT tube axial fan are enclosed in a ventilated tube, out of the air stream. This tube is open at both ends for cooling of the shielded fan shaft bearing, and for belt maintenance. Bearing is protected by a flinger and shield, plus neoprene seals. Models are offered with 16½ to 48½-in. fan diameters with free air capacities of 2730 to 37,500 cfm. Ball bearing motors from ⅓ to 7½ hp are also located out of the air stream. Fan is for duct installation wherever heat, fumes, dust, and smoke at temperatures up to 180° F must be moved against high static pressure without overloading the fan. Made by **Chelsea Fan & Blower Co.**, Dept. NED, 639 South Ave., Plainfield, N. J.



▲ For more details circle **NED-682 F8** on enclosed inquiry slip ▲

AUTOMATIC SHEET PILER
gravity fed and power driven units

Wide range of sheet widths and lengths can be handled by the Model RSP-1 automatic reversible sheet piler. Sheet is run onto the roller-equipped piler from



a mill exit table, processing or shear line, or conveyor. As it reaches the end of the piler, it actuates a transverse roller frame which tips the sheet off the table. A side guide assures a straight pile. When piling is complete on one side of the piler, a manual or automatic reversing switch causes piling to continue on the opposite side without interrupting the flow of sheets. Both gravity fed and power driven models can be furnished to accommodate a variety of sheet sizes. Made by **Guide Co.**, Box 158-A, Canfield, Ohio.

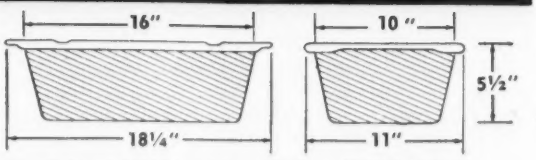
▲ For more details circle **NED-683 F8** on enclosed inquiry slip ▲

Manual Hoists

American Chain & Cable Co., Wright Hoist Div.—Available in 17 lifting capacities from ½ to 50 tons, line of Wright Safeway hand hoists is described in 8-page Bulletin DH-164-C. They feature compact, enclosed, sturdy design. Trolleys and accessories are also covered.

▲ For more details circle **NED-684 F8** on enclosed inquiry slip ▲

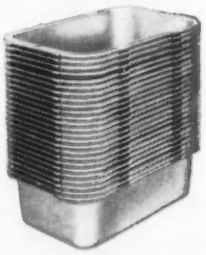
Bathey PAK-N-STAK TOTE PAN

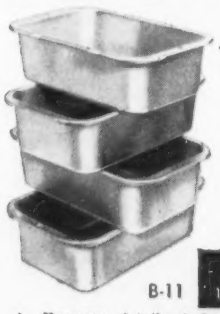


A new lightweight, leakproof, drawn steel Tote Pan designed to fit the needs of production shops of all types. Minimum side taper and small bottom radius maintains full cubic content capacity, (825 cu. in.).

Weight 5 Pounds 19 Ga. Steel

No unsightly, cumbersome collection of pans when "PAK-N-STAK" moves in. There are actually 24 nested pans shown in photo to the right.





MBC

Crosstacking, with pans locked in both directions, is accomplished by the embossed bottom and depressions in the lip edge. Contents remain visible at two points for visual identification.

DEALERS IN PRINCIPLE CITIES

B-11

BATHEY MFG. CO.
100 S. MILL STREET PLYMOUTH, MICH.

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50% STRONGER
THAN COMMON SHACKLES

CROSBY-LAUGHLIN Load-Rated* SHACKLES

⅓ TO 75-TON CAPACITIES

Guaranteed capacities are offered by new Crosby-Laughlin* "Load Rated" Shackles that have their safe working load drop forged in the body. Special steels, drop forged—heat treated, plus perfect pin alignment produce quality shackles actually 50% stronger than common shackles, *size for size!* Select from a broad line of round pin, screw and safety shackles in anchor and chain styles . . . be sure you get RED fittings—symbol of *genuine* Crosby-Laughlin "Load Rated" Fittings—it's the world's most complete line. *New catalog* now available from mill supply, construction or industrial equipment distributors. Or write:

*Trademark

CROSBY-LAUGHLIN *Division*
AMERICAN HOIST & DERRICK COMPANY
FT. WAYNE 1, INDIANA

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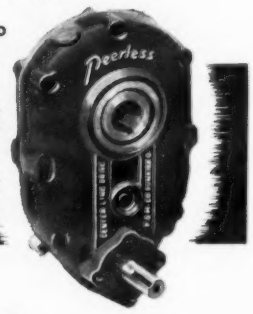
SHAFT MOUNTED

NO TORQUE ARM REQUIRED

Peerless® CENTER LINE DRIVE SPEED REDUCERS



97+% EFFICIENT

- GREATER POWER OUTPUT
- ROLLER BEARINGS ON INPUT AND IDLER SHAFTS
- POSITIVE LUBRICATION WITH OIL SIGHT PLUG
- DEPENDABLE LONG LIFE PROVEN BY THOUSANDS IN DAILY USE SINCE 1946
- PRECISION MACHINED ALLOY GEARING
- LARGE "OILITE" OUTPUT BEARINGS
- OUTPUT SPEEDS VARIABLE THRU "V" BELT PULLEYS
- SOLVE YOUR COST PROBLEM WITH A PEERLESS "CENTER LINE DRIVE" SPEED REDUCER

STANDARD MODELS ¼ To 10 H.P.

HIGHEST QUALITY — NEW LOW PRICES

WRITE FOR BULLETIN No. 216

PEERLESS GEAR & MACHINE CO., INC.
140-150 E. WAYNE ST.
DUNKIRK, OHIO
PHONE 3101

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Now... MUCH MORE

Quality engineered features include:
- Patented leak-proof hydraulics
- 4-1/3" lift in three strokes
- Side thrust free ram
- No-drop handle
- Self-leveling steering wheels
- Pallet entry rollers
- Sectional steel forks
- Taper roller bearings

for only $358

Capacities: 2200, 3500, and 4400 lbs.
Choice of steel, aluminum, rubber, nylon, or plastic wheels.

New **MULTITON** STEIN BOCK FULLY HYDRAULIC **PALLET TRUCK**

Write for complete information

STOKVIS ✿ EDERA & CO., inc.
Dept. No. P6NE, 18 Secatoag Ave., Port Washington, N. Y.

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YOU too, can obtain QUALITY FINISHES

more efficiently...

more economically...

with

CLAIR

SURFACE FINISHING MACHINES

Ten different basic CLAIR models to choose from. Write for information on *any* surface finishing problem you may have.

CLAIR MANUFACTURING CO., Inc., OLEAN, N.Y.

Offering the Most VERSATILE Line of Surface Finishing Machines

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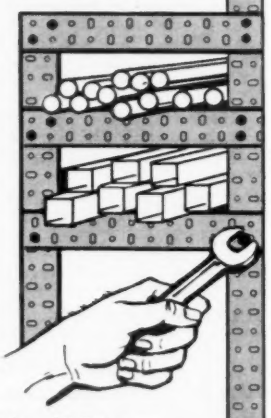
BUILD QUICKLY, CUT COST WITH COLSON STRUCTO ANGLES

STRUCTO

An ordinary wrench, a cutter and supply of Colson-engineered STRUCTO angles and there is no limit on how much you can cut equipment costs. Maintenance men can quickly and easily build work benches, bins, partitions, machinery stands, storage platforms and racks...hundreds of pieces of equipment...to meet individual design needs.

Reusable STRUCTO angles are cut for positive bolting line-up at every 1½-inch point. Available in two sizes and two gauges (interchangeable) 10 to 12-foot lengths, 10 angles to a bundle. Stores in one tenth of space required for lumber.



Your local Colson distributor can help you. Call him or write to:

COLSON CORPORATION
Special Products Div. Somerville, Mass.

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PIPE SEALING COUPLING
joins underground steel water lines

A steel body with a special Dresser Grade 27 gasket comprises this 200 Aquapak self-sealing coupling for joining underground steel water lines. Gasket has three sealing lips which combine with internal water pressure to form the seal. Sizes range from 4 to 12¾-in. OD. Flexibility of coupling allows curves to be laid with straight sections of pipe. Pipe deflections up to 4 degrees can be accommodated. Made by **Dresser Industries, Inc.**, Dresser Mfg. Div., 52 Fisher Ave., Bradford, Pa.

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FLASHLIGHT BATTERY
sleeve holds two rechargeable cells

Easy - to - handle Multi-Lite 2D nickel-cadmium, rechargeable flashlight batteries are intended for industrial users and companies who make extensive use of flashlights. The Multi-Lite consists of two Type D cells held together in a plastic sleeve. Recharging is accomplished by inserting batteries into clips of a gang-type charger which will charge up to 15 cells simultaneously. Charger mounts on wall or table and is powered from 115-v ac. Batteries will take more than 200 recharging cycles and average about 4 hours of steady light per charge. Made by **Gould-National Batteries, Inc.**, Multi-Lite Div., Dept. 247, First National Bank Bldg., St. Paul 1, Minn.

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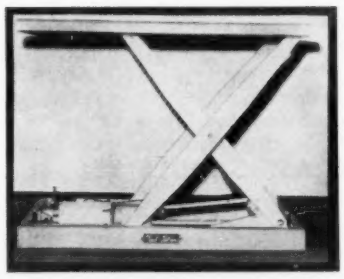
LIFT TABLES
have capacities to 6000 lb



Lift tables with 24 x 48, 30 x 52, and 72 x 42-in. one-piece steel plate tops are offered in this line of lift tables. They raise 2000, 4000, and 6000 lb, respectively, to heights of 30, 36, and 48 in. in less than 30 sec. Entire unit collapses to a height of 7 in., or it can be flush-mounted in the floor. It can also be used as a portable unit. Power is supplied by single or three-phase motor and pump units, and lifting is by a heavy duty hydraulic cylinder. Made by **Clark-Aiken Co.**, 955 Hart Ave., Lee, Mass.

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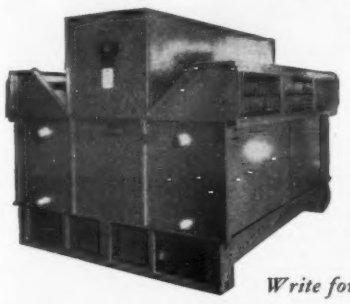
NIAGARA Aero

SECTIONAL HEAT EXCHANGER

A Self-Contained Cooling System

● Niagara *Aero* Heat Exchanger offers a completely self-contained system independent of any considerable water supply, replacing both shell-and-tube cooler and cooling tower. Water consumption is only the evaporation and the small amount passed as blowdown to prevent hardness build up. Net saving is 95% of water used in cooling from external sources. You solve the problem of water supply and disposal; you save much additional expense and equipment in water handling, piping, pumping.



Casing panels are removable with full access to all parts and interior piping for easy inspection. Sections are shipped as flat panels with saving in freight charges.

Write for Bulletin No. 132

NIAGARA BLOWER COMPANY
Dept. ED-4, 405 Lexington Ave., New York 17, N.Y.

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thanks to XEROGRAPHY...

FRANK G. MARTIN, assistant secretary of Ross Lumber Company, Inc., Medford, Oregon, reports xerography's versatility saves $28,000 a year.

Ross Lumber Company, Inc. copies the *quality*, too ... saves $28,000 yearly on offset duplicating of

- Monthly detailed cost statements
- Uniform-size insurance registers
- Audit of two sales companies
- Last minute changes on sales lists
- Circuit diagrams for maintenance
- Township section maps
- Timber-cruiser estimates
- Additional copies of invoices
- Correspondence
- Many others

From the savings of just one xerographic operation—the reduced reproduction time of its monthly detailed costs statement—the Ross Lumber Company Inc., Medford, Ore., more than pays the cost of its XeroX® copying equipment. Besides, Ross saves an estimated $28,000 annually by xerography—the clean, fast, dry, electrostatic copying process.

Gratifying as these economies are, it is the flattering quality of the runoff copies—each as sharp as the original—that enthuses Ross officials. Equally stimulating is xerography's enormous versatility, which permits the enlargement, reduction, or size-to-size copying—onto duplicating masters of all kinds—of anything written, printed, typed, or drawn.

XeroX copying equipment is widely used in business, industry, and government for all types of paperwork applications. A major use not listed above—Providing multiple copies of engineering drawings in reduced size.

WRITE for proof-of-performance folders showing how companies of all kinds, large and small, cut costs and speed paperwork by xerography.

HALOID XEROX INC.
58-215X Haloid St., Rochester 3, N. Y.
BRANCH OFFICES IN PRINCIPAL U. S. AND CANADIAN CITIES

HALOID XEROX®

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"Changing to *FILON*® glazing panes saves us thousands in maintenance costs every year!"

say chief engineers in all parts of the country

When you glaze, skylight or sidelight your plant with shatterproof FILON, you cut maintenance costs where it counts most!

End window breakage. FILON is shatterproof, can not crack or splinter, thus eliminating injuries to workers. Proof against impact damage, flying objects, vibration, hail, sonic blast, other industrial hazards.

Eliminate glass painting. Select the FILON color that provides the desired amount of glare-free, diffused light. All FILON colors are built-in to last, even against acids, fumes and corrosion. *Super-smooth* surface, easily washed by hose.

Lower lighting costs. FILON floods working areas with evenly diffused daylight, cuts artificial lighting costs. Increases production efficiency by reducing eye-strain.

Low-cost, easy installation. FILON glazing panes are pre-cut to standard sash sizes, install like glass. FILON building panels for skylighting and sidelighting nest perfectly with other building materials, require no sash or framing.

Specify low-cost FILON to replace broken windows and skylights in present plants, and in your new plant construction.

FREE BOOKLET with full details, light transmission chart. Write to Filon Plastics Corp., 125 Lomita Street, El Segundo 6, California, or consult Sweet's File.

Insist on the FILON *label on every panel with the 5-Way FILON Guarantee*

- Superior Fiberglass-and-Nylon reinforced strength.
- Uniform thickness for easier installation and better diffusion of light and color.
- Shatterproof for absolute safety.
- Weatherproof for maximum durability.
- Exceeds standards published by U.S. Bureau of Standards.

FILON PLASTICS CORPORATION

Los Angeles • New York • Chicago
Atlanta • Dallas • San Francisco

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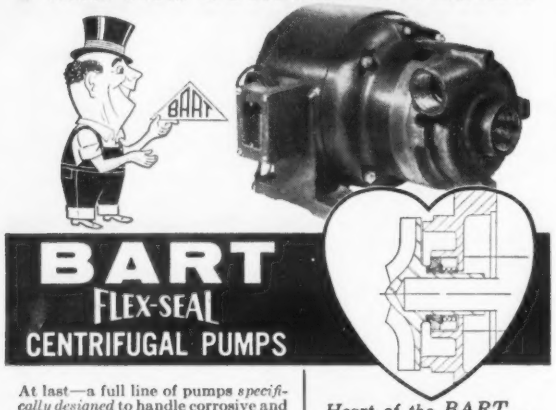
now! greater safety and efficiency in

PUMPING CORROSIVE FLUIDS



At last—a full line of pumps *specifically designed* to handle corrosive and abrasive fluids in the 1 to 80 GPM range, at heads to 70 feet.

No longer need you cut down bigger pumps in range and lose efficiency—or put up with undependable smaller pumps.

Bart pumps have fewer parts to wear or get out of order. 12 models, each in corrosion resistant Type 20 Stainless Steel. Or other alloys on special order.

Write for catalog and performance curves.

Heart of the BART.. the exclusive Flex-Seal! Effectively minimizes a long-prevalent basic weakness of centrifugal pump design. Self-adjusting to wear. Needs no external lubrication. Carbon stator with ceramic seat, unexcelled for long wear—or zircon filled Teflon stator with Stellite or Worthite seat for severest corrosive service.

BART MANUFACTURING CORP.
ELECTROFORMING • PIPE LINING & COATING • PLATERS • PUMPS • ENGINEERING DESIGN SERVICES
229 Main St., Belleville 9, New Jersey

For more details circle NED-697 F8 on enclosed inquiry slip

High-speed guideless tube straightening

AT ALCOA'S New Kensington plant: From 200,000 to 300,000 pounds of aluminum tubing passes through this new Model AX Mackintosh-Hemphill rotary tube straightener every month in the Tube Department of Alcoa's New Kensington, Pa. plant.

Here's why metal producers and fabricators use Mack-Hemp rotary straighteners when pipe and tube must meet exacting standards for straightness and roundness:

- All six rolls driven—no guides—surface of straightened tubing is unmarked.
- Eliminates end bends and ovality; provides premium straightness and roundness over full length of tube.
- Rugged, heavy-duty construction.
- Models for all O.D.'s from 0.050" to 16" of ferrous and non-ferrous pipe and tube.
- Speeds up to 800 fpm.
- Easy to reset for different diameters—all models now available in three-post construction. Fast roll adjusting mechanism is enclosed and protected from scale and water.

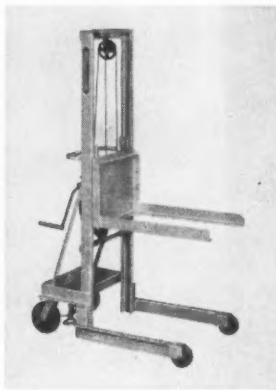
FREE BULLETIN

For a complete description of the Mack-Hemp straightener, write today for a copy of the 24-page bulletin, "How to Straighten Pipe and Tube." It's yours for the asking.

MACKINTOSH-HEMPHILL
DIVISION OF
E. W. BLISS COMPANY
Pittsburgh and Midland, Pa.

For more details circle NED-698 F8 on enclosed inquiry slip

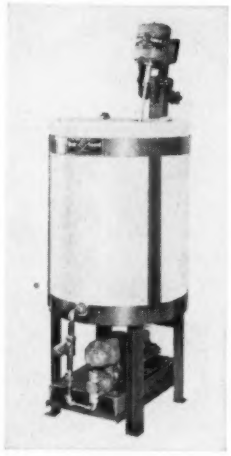
DRUM-HANDLING TRUCK
arms slide under horizontal drum



Drums of paint, glue, chemicals, lubricating oil, and cutting compounds can be handled by the Type DLK Shoplifter. Lifting arms lower to the floor and slide easily under a horizontal 55-gal drum. Once lifted, the drums can be drained, moved to another location, or placed in a rack for later use. Truck lifts drums to a height of 57 in. It is equipped with large hard rubber wheels, floor lock, and crank-up and crank-down lift action. An automatic friction disc clutch holds the load at any desired height. Truck sells for $305, the four-drum rack for $50, and an accessory hinged platform plate for $40. Made by **Economy Engineering Co.**, 4509 W. Lake St., Chicago 24, Ill.

For more details circle NED-699 F8 on enclosed inquiry slip

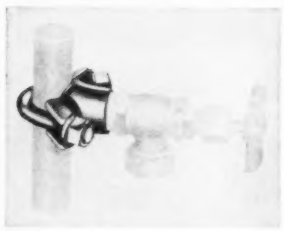
CHEMICAL FEED UNIT
has 50-gal polyethylene tank



Corrosive chemicals can be handled by the Bac-O-Feed chemical feeder, a packaged unit with 50-gal polyethylene tank and an agitator with a stainless steel shaft and propeller. It can be fitted with a stainless steel-headed proportioning pump and polyvinyl chloride piping to suction the pump. The liquid level is always visible in the translucent tank. Tank has two ½-in. inlets at the top, a ¾-in. drain outlet in the bottom, and a ½-in. pump suction outlet 2 in. above the bottom. Pump is mounted below the tank between the 18-in. high legs. Made by **Bird-Archer Co.**, 4339 N. American St., Philadelphia 40, Pa.

For more details circle NED-700 F8 on enclosed inquiry slip

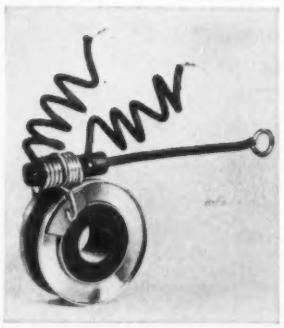
BRASS SADDLE TEE
for ⅝-in. OD copper tubing



Designed specifically for use on ⅝-in. OD copper tubing or pipe, Model 25C Brass saddle tee has a ½-in. FPT outlet. Unit is a heavy brass casting which is attached with a plated steel clamp bracket held by plated steel screws. Neoprene washer placed between casting and tubing provides leakproof seal impervious to most liquids and gases. Steel bracket is dimpled to make a slight depression in the tubing. This prevents rotation of the unit on the tubing or pipe. Made by **Sall Bros. Co.**, Dept. N, Rockford, Ill.

For more details circle NED-701 F8 on enclosed inquiry slip

MOTOR-STARTING SWITCH
for capacitor and split-phase motors



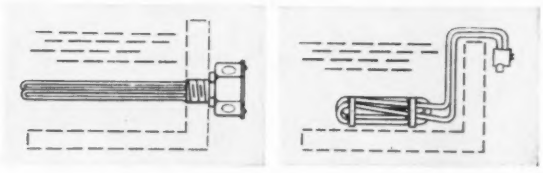
The Uni-Tog enclosed motor-starting switch with universal-centrifugal toggle action fits all makes of capacitor and split-phase motors without adjustment. They are set at one of the following motor speeds: 900, 1200, 1500, 1800, 3000, or 3600 rpm. In operation, centrifugal force presses a floating copper bridge against a beryllium spring. When rated motor speed is reached, a silver alloy contact on the bridge breaks with the fixed silver contact. When force of spring again balances centrifugal force, contact is re-established. Bore sizes range from ½ to 1⅝ in. with outside diameters of 2, 2½, and 3 in. End-play is eliminated. Made by **Kirkwood Commutator Corp.**, Dept. NED, 4855 W. 130th St., Cleveland 11, Ohio.

For more details circle NED-702 F8 on enclosed inquiry slip

For more details circle NED-703 F8 on enclosed inquiry slip

For fast heat, For clean heat . . .

Build heat into your product or process with General Electric immersion heaters



For heating liquids in your processing equipment or in your products no other method offers the cleanliness, speed and selectivity made possible by immersion heaters from General Electric.

You get all the heat: Because these heaters can be placed right in the liquid you get maximum efficiency. Heat losses to surrounding atmosphere are reduced. Working conditions are more comfortable.

Fire hazards reduced: Safer, quicker electric heat eliminates danger of open flame, inconvenience of smoke and fumes.

You get accurate control: To give you quick heat regulation for changing conditions, precise thermostat controls are available.

FREE APPLICATION INFORMATION

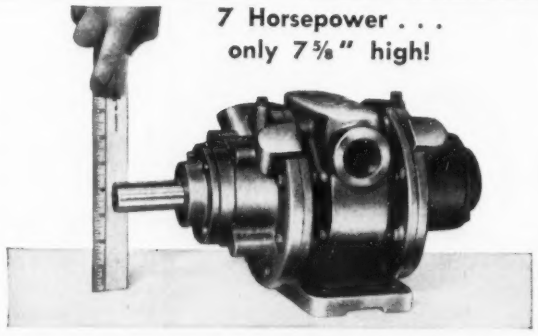
DELIVERY TODAY

Write Section 723-16, General Electric, Schenectady 5, N.Y. To get delivery today on the heaters you need, call your General Electric Apparatus sales office for the name of your nearest stocking distributor for heaters and devices.

GENERAL ELECTRIC

For more details circle NED-704 F8 on enclosed inquiry slip

7 Horsepower . . . only 7⅝" high!



It's NEW! Variable-speed Model 16AM

GAST AIR MOTOR

Here's compact, explosion-proof power! Only 14⅜" x 8" x 7⅝" — wt. 65 lbs. — yet up to 7 h.p. on 90 lbs. air pressure. Speed variable from 300 to 2,000 r.p.m. with simple valve control. Overloads can't burn it out — stalling does no harm.

Has foot, also tapped holes for flange mounting to your machine. Use as original equipment or in plant to drive hoists, mixers, pumps, fans, etc. Priced at $200.

Write for your copy of Bulletin 16AM.

GAST MANUFACTURING CORP., P.O. Box 117-R
Benton Harbor, Michigan

See Catalog in Sweet's Design File

GAST ROTARY

- AIR MOTORS TO 7 H.P.
- COMPRESSORS TO 30 P.S.I.
- VACUUM PUMPS TO 28 IN.

"Air may be your answer!"

For more details circle NED-705 F8 on enclosed inquiry slip

Don't miss "The Farval Story"
GET YOUR FREE COPY TODAY!

Modern Farval Centralized Lubricating Systems can drastically cut your production costs in the following ways:

SAVES TIME
—quickly lubricates all bearings while equipment remains in full operation.

SAVES MANPOWER
—a single Farval System can easily out-lubricate ten men with grease guns.

SAVES POWER
—when friction is reduced through proper lubrication, power consumption often drops as much as 20%.

SAVES BEARINGS
—when your equipment is Farvalized, bearing life can increase up to 25 times.

SAVES LUBRICANT
—as much as 75% of that formerly required with normal lubricating guns.

This new Bulletin 26-S contains 20 colorful pages that graphically show the complete Farval line and how these versatile lubricating systems can fit into your production picture.

The Farval Corporation
3283 East 80th Street
Cleveland 4, Ohio

FARVAL CENTRALIZED SYSTEMS OF LUBRICATION

▲ For more details circle NED-706 F8 on enclosed inquiry slip ▲

Cut Machinery Installation and Maintenance to the bone... with these UNISORB Mounts

Complete line of machinery mounts for all types of equipment. Users report savings as high as 75% in mounting time, 30% in costs — plus up to 85% vibration absorption! No bolts or lag screws.

Two types to choose from: Standard Unisorb or versatile Unisorb Level-Rite, with built-in leveling. Wide variety of pad densities and thicknesses to suit vibration "personality" of different machines . . . exclusive with Unisorb.

Try Unisorb on Special Trial Offer. Tell us what machine you want to mount and we'll send ready-cut pads. If not satisfied, return and we'll credit your invoice. Write or call today.

UNISORB
DIVISION OF THE FELTERS CO.
224 South St., Boston 11, Mass.

Free Facts Booklet also available.

▲ For more details circle NED-707 F8 on enclosed inquiry slip ▲

You and KESTER Can Lick Any Soldering Problem!

Kester, with more than fifty years experience in solving every conceivable type of soldering problem, is the only company to turn to for a fast economical solution. No problem is too large or too small and what's more, there's no obligation involved for this engineering service.

KESTER SOLDER
COMPANY 4249 Wrightwood Avenue • Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada

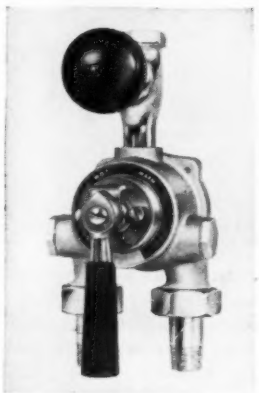
▲ For more details circle NED-708 F8 on enclosed inquiry slip ▲

CASTER BRAKE
for medium duty casters

Adjustable side brake mechanism for attachment to medium duty casters has a formed brake shoe which contacts the tire tread in a vertical axis of the caster. The actuating force provided by the foot lever is in line with the braking force. The brake shoe is controlled by cam action. the cams being a preformed part of the brake shoe. Brake is for use with standard 4 x 4-in. top plate casters; casters with steel disc, replaceable-tire wheels of 4, 5, and 6-in. diameter; and all hard or soft rubber tread wheels from 4 to 6 in. in diameter. It is also applicable to rigid models. Made by **Jarvis & Jarvis, Inc.**, Scudder Avenue, Palmer, Mass.

▲ For more details circle NED-709 F8 on enclosed inquiry slip ▲

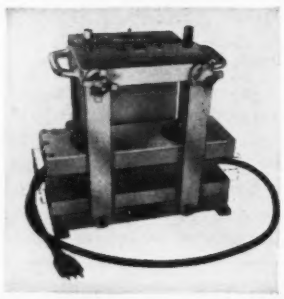
STEAM & WATER MIXER
produces hot water at desired heat



Supplying hot water only where and when it is required, the DWS steam and water mixer eliminates the need for storage tanks, boosters, or instantaneous heaters. The thermostatically controlled unit provides water in the 160 to 200° F range by mixing steam and hot water, or up to 140° F water by mixing steam and cold water. Flow temperature is varied with a regulator handle. Dura-trol thermostat compensates instantly and automatically for variations in temperature or pressure in either steam or water supply. Made by **Leonard Valve Co.**, 1362 Elmwood Ave., Cranston 7, R. I.

▲ For more details circle NED-710 F8 on enclosed inquiry slip ▲

CABLE VULCANIZER
repairs standard sizes and types



Reinsulating and rejacketing natural and synthetic rubber and thermoplastic-covered cables can be performed in this molding press, available for operation on seven standard alternating and direct current voltages. Bearing a 3000-w rating, it will accommodate all standard cable types and sizes through the use of interchangeable aluminum molds. Heat from four replaceable strip heaters is applied to areas being vulcanized at molding pressures up to 25 tons. The 18⅛ x 18¾ x 13-in. press takes molds up to 6 x 6 x 24 in. and can be used in tandem for making longer cable repairs. Made by **Joy Mfg. Co.**, Electrical Products Div., Dept. A-46, 1201 Macklind Ave., St. Louis 10, Mo.

▲ For more details circle NED-711 F8 on enclosed inquiry slip ▲

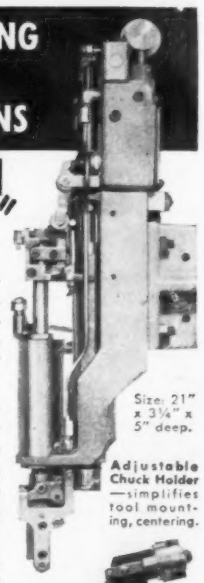
RUG & FLOOR SCRUBBER
converts for waxing and polishing

Removal of the transparent plastic tank of this rug and floor scrubbing machine converts it quickly for floor waxing and polishing. Accurate fluid feed is controlled by an electromagnetic valve on the motor housing and a switch atop the handle assembly. Machine is powered by a General Electric high-torque capacitor motor. Its speed reduction unit has hardened steel gears, permanently sealed in grease. Sizes available are 12, 14, 16, 18, and 20 in. Made by **Republic Floor Machine Co.**, Dept. NE, 1098 Bedford Ave., Brooklyn 16, N. Y.

▲ For more details circle NED-712 F8 on enclosed inquiry slip ▲

SAVE TIME AUTOMATING SMALL PARTS ASSEMBLY OPERATIONS

SPECIFY **DIXON** "Auto-Positioner"



- **STANDARD HEAD DESIGN**—Saves engineering time. Easy to apply to variety of jobs. Operates on ordinary 80# air pressure, 110 volts. Has machined T-slot surface, simple adjustments. Tooling, mounting column, feeders, etc., optional.
- **BUILT-IN SENSING**—Acts as automatic inspector, assures quality production. Machine stops if part is missing or malformed.
- **FAST, VERSATILE**—Handles wide range of feedable metal or plastic parts from 1/16" to 3" O.D. at speeds up to 100 cycles per minute. Easy to tool.
- **PRECISION-BUILT**—Sturdy frame, one-piece super-finished piston and rod, cushioned air cylinder, J.I.C. controls.

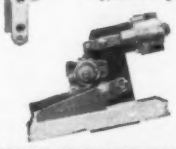
Size: 21" x 3¼" x 5" deep.

Adjustable Chuck Holder—simplifies tool mounting, centering.

DIXON

WRITE FOR FREE DATA SHEETS—New circulars give complete facts, show typical applications.

DIXON AUTOMATIC TOOL, INC.
2302 - 23rd AVENUE • ROCKFORD, ILLINOIS



DIXON PARTS ESCAPEMENTS
Release single parts or multiples—speeds up to 200 per min. Std. models for air, solenoid, mechanical operation.

Equipment for Automatic Parts Handling and Assembly

▲ For more details circle NED-713 F8 on enclosed inquiry slip ▲

PROTECT YOUR VALVE INVESTMENT

Specify and be sure you get **JENKINS** Renewable Composition **DISCS**

MADE BY THE ORIGINATORS OF RENEWABLE DISC VALVES

Jenkins Bros. has remained the leader in composition disc development and production since 1864, when the first renewable disc valve was introduced.

THE ONLY MANUFACTURER OF BOTH VALVES AND DISCS

Jenkins Bros. devotes continuous laboratory and field research to disc improvement through use of new compounds, and new production techniques.

WRITE FOR NEW GUIDE FOR DISC SELECTION

Describes all Jenkins Discs, and their applications for steam, hot and cold water, air, gas, oil, gasoline . . . including the new TEFLON® DISC for lasting, dependable control of oxygen and other gases, solvents, acids, alkalies, and other chemicals,—and for liquid food and similar services.

Ask your Jenkins Valve Distributor for Disc Folder Form 203, or write: Jenkins Bros., 100 Park Ave., New York 17.

FOR HIGHEST EFFICIENCY USE JENKINS DISCS IN

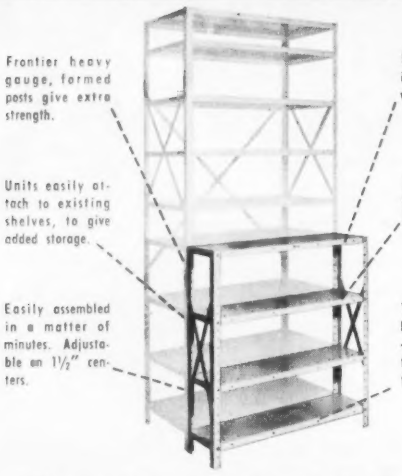
JENKINS VALVES

LOOK FOR THE JENKINS DIAMOND TRADE JENKINS MARK ®

Jenkins Bros

▲ For more details circle NED-714 F8 on enclosed inquiry slip ▲

CUT INSTALLATION COSTS WITH FRONTIER *all steel* SHELVING!



Big economies come to industry with Frontier engineered shelving systems. This comprehensive shelving line solves storage problems and is flexible to fit any floor plan.

See your Frontier dealer or write for FREE literature.

FRONTIER MANUFACTURING COMPANY
P. O. BOX 13266 • DALLAS 20, TEXAS

▲ For more details circle **NED-715 F8** on enclosed inquiry slip ▲

1 *For safe, clean, simplified handling of parts between successive production stages. Contents always accessible, visible—protected.*

HOW PALLETAINERS® can help your *management* cut Costs...

2 *Palletainers save time in the shipping department, increase safe truck and rail loading capacities and eliminate transit damage. For return shipment or storage, folded Palletainers save 75% of space and receive lowest freight rates.*

3 *When storage or warehouse space is at a premium, look to Palletainers. They'll stack to the roof with safety and you can inventory their contents at a glance!*

If you store, process or ship materials of *any* kind...*You need Palletainers.**

Because... Palletainers provide fast, efficient low cost unit handling!

Because... Palletainers reinforced construction makes them almost indestructible.

Because... There's a size, capacity and type to match every conceivable need.

Because... It's "profit-wise" to keep materials, parts and finished products moving efficiently and economically... through production, temporary storage, in-plant transport or long distance hauling.

It will pay you to investigate USP Palletainers... they'll help you cut costs where they really count!

The Palletainers you purchase today will quickly pay for themselves in man hour and equipment savings. Put them to work today.

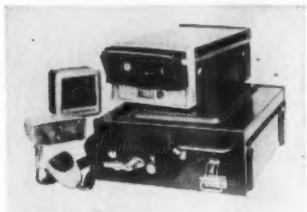
Fluid loads? Sure... Bulk Lode Palletainers equipped with heavy duty liners simplify all fluid load handling.

WRITE—WIRE OR PHONE

UNION STEEL PRODUCTS CO.
505 Berrian St. Albion, Michigan

▲ For more details circle **NED-716 F8** on enclosed inquiry slip ▲

TWO-WAY MOBILE RADIO has transistorized power supply



A fully transistorized power supply is featured by this 100-w T-Power two-way mobile radio. Equipment is distinguished by black finned heat sinks which conduct heat from externally mounted transistors. It includes 60-w radiophones in the 144-174 mc band and 50 to 100-w units in the 25-54 mc band. Use of transistors in the 50-w low frequency power supply allows its mounting in a 10-in. wide housing for dash or trunk placement. Its weight has been reduced from 74 to 47 lb. Radiophones can be operated from any 12-v primary with positive or negative ground. Made by **Motorola Communications & Electronics, Inc.**, Dept. NED, 4501 W. Augusta Blvd., Chicago 51, Ill.

▲ For more details circle **NED-717 F8** on enclosed inquiry slip ▲

AUTOMATIC MULTIPLE SWITCH has 187 ten-ampere wiping switches actuated by a prepunched card

Cardmatic automatic multiple switch is a self-actuating type mechanism built around 187 self-cleaning, wiping type switches of 10-amp capacity and low contact-to-pin resistance (0.00025 ohm nominal). It is designed for use where flexible multiple switching arrangements are required, such as in handling complex data in programming, automatic inspection, production control, and computer work. Connection to about 60 individual top contacts simplifies wiring by use of top contact strips.

Switch deck is made up of 17 x 11 contacts in a 3 x 5-in. area. A selected, prepunched code card is inserted into the unit to operate a momentary control solenoid trip mechanism to actuate all desired contacts simultaneously. A top lever opens all contacts and releases the code card. Possible switching combinations are 12.6 x 10^{56}. Made by **Hickok Electrical Instrument Co.**, 10674 Dupont Ave., Cleveland 8, Ohio.

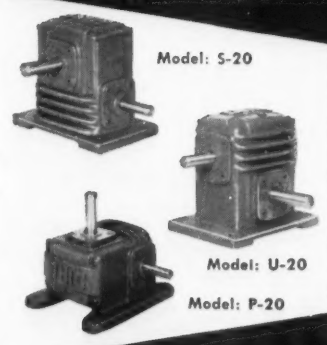
▲ For more details circle **NED-718 F8** on enclosed inquiry slip ▲

Flash-Butt Welders

Taylor-Winfield Corp.—The flash-butt welding process is described in 16-page Bulletin 7-913, and various types of clamping and flash and upset mechanisms are shown. Specifications and features of 40 butt welding machines for general or specific applications are described. Many are of the automation type.

▲ For more details circle **NED-719 F8** on enclosed inquiry slip ▲

OHIO GEAR'S NEW LINE OF FIN COOLED Speed Reducers



...handle heavier loads. ...take less space.

- Fin Cooling
- New Rugged Housings
- Smaller Size To Capacity Ratio
- Heavier Bearings
- Versatile Range of Speeds And Sizes

• These OHIO Speed Reducers represent a new standard for rugged, compact power transmission. Called the "Series 20", the new models are available in a wide variety of capacities with reduction ratios from 9:1 through 58:1, and for speeds up to 1850 RPM. All models in the new line feature fin cooling to permit handling heavier loads in less space.

GET YOUR NEW OHIO CATALOG!

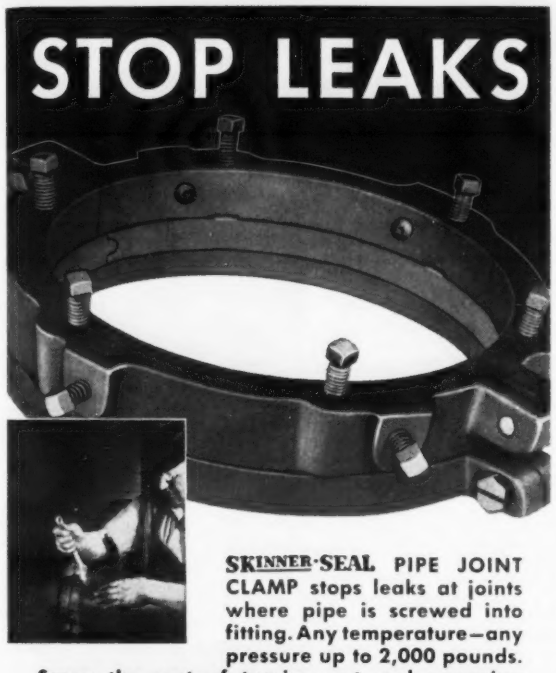
186 pages of engineering data, size and selection charts on speed reducers, gears and sprockets. Send for your free copy today!

Manufacturers of gears and speed reducers-both stock and special

Ohio **OHIO GEAR Co.**
1320 E. 179th ST. • CLEVELAND 10, OHIO

▲ For more details circle **NED-720 F8** on enclosed inquiry slip ▲

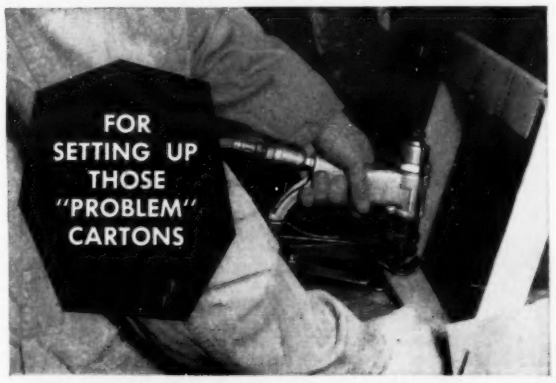
STOP LEAKS



SKINNER-SEAL PIPE JOINT CLAMP stops leaks at joints where pipe is screwed into fitting. Any temperature—any pressure up to 2,000 pounds. Saves the cost of tearing out and renewing leaky fittings. Prevents shutdowns. Order from your local industrial distributor!

M. B. SKINNER CO., South Bend 21, Ind.—Established 1898

▲ For more details circle **NED-721 F8** on enclosed inquiry slip ▲



DUO-FAST AIR-OPERATED STAPLING PLIER

Clinches staple securely with firm, damage-free "grab".

Set up special cartons and corrugated filler faster, easier with handy DUO-FAST Stapling Plier. You just flick the trigger... air does the rest. Powerful, yet portable... lets you take the tool to the work, instead of moving the work to a large stationary tool. Ideal for large, unwieldy cartons.

Free Service. One of 150 models, DUO-FAST Air Plier carries our famous Free Service Guarantee. Why settle for less?

Send today for Free Air Plier Bulletin FT-28. There's no obligation.

8078

DUO-FAST/FASTENER CORPORATION
3758-60 River Road • Franklin Park, Ill.

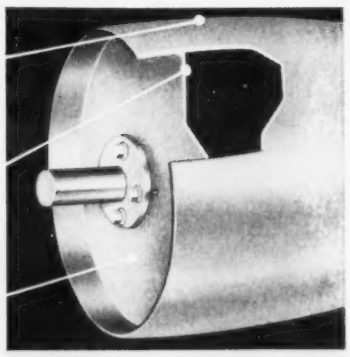
▲ For more details circle **NED-722 F8** on enclosed inquiry slip ▲

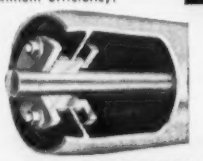
NEW CURVE CROWN WELDED ALL-STEEL PULLEYS
STEPHENS-ADAMSON

***CURVE CROWN DESIGN**
Accurately formed Curve Crown on rim outer ends eliminates belt stretch and wear . . . increases belt training effect more than 100%.

STURDY RIM CONSTRUCTION
Absolutely round one piece pulley rims formed under hydrostatic pressure. Seam machine-welded inside and out insures 100% weld penetration.

ACCURATE END PLATE ASSEMBLY
End plates O.D. and I.D. machined to insure concentricity between bore and outer rim. Pressed fit . . . submerged arc welding for maximum efficiency.





FEATURING "SQUEEZELOCK" HUB DESIGN
Revolutionary "Squeezelock" Hub design provides gripping power for full torque transmission without keyways plus eliminating distorting loads against pulley end plates.

*PATENT APPLIED FOR

WRITE TODAY FOR BULLETIN 558

STANDARD PRODUCTS DIVISION
STEPHENS-ADAMSON MFG. CO.
12 Ridgeway Ave. Aurora, Illinois

▲ For more details circle **NED-723 F8** on enclosed inquiry slip ▲

NEW! BATTERY OPERATED

ClarkeAmatic

Self-Propelled Floor Maintainer

This new 20" Clarke-A-matic — the only battery-powered maintainer on the market — scrubs, dries, polishes or steel wools up to 15,480 sq. ft. per hour, 5 to 15 times faster than hand methods. No electric cable to restrict maneuverability, no cable reel to obstruct operator's vision, no gasoline engine, no noise, no fumes — just quiet, fast, low cost operation. Write for details.

Clarke SANDING MACHINE COMPANY
226 Clay Avenue, Muskegon, Mich.

Authorized Sales Representatives and Service Branches in Principal Cities
Distributed in Canada: G. H. Wood & Co., Ltd., P.O. Box 34, Toronto 14, Ont.

▲ For more details circle NED-724 F8 on enclosed inquiry slip ▲

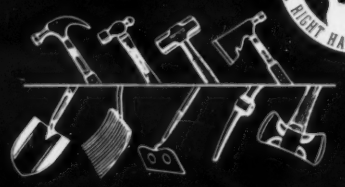
2 COSTS COME DOWN with TRUE TEMPER taper-forged shovels

1. THE COST OF SHOVELS—penny for penny, they're the l-o-n-g-e-s-t lasting shovels you can buy. Taper-forging puts metal where it's needed and eliminates deadweight. Metal is thickest at shoulders and neck, medium-thick at point and center, thinner at edges. Result: greatest strength per ounce.
2. THE COST OF SHOVELING—which is even more important. The man with a taper-forged shovel turns out more work per shift because the saving in deadweight means an increase in payload. In a day's time, it's considerable.

Choose from four models: DYNALITE for lightest weight, BANTAM for industrial service, FOX for contractors' work, BULLDOG for special, heavy jobs. All have free-scouring blades and famous fire-hardened handles — smooth, comfortable, splinter-free. Contact your True Temper industrial distributor.

WRITE FOR FREE CATALOG
"TOOLS FOR INDUSTRY"
True Temper
1623 Euclid Avenue
Cleveland 15, Ohio

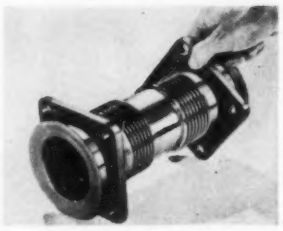
INDUSTRIAL DISTRIBUTORS — SERVING INDUSTRY ECONOMICALLY — THE RIGHT HAND OF PRODUCTION



TRUE TEMPER
THE RIGHT TOOL FOR THE RIGHT JOB

▲ For more details circle NED-725 F8 on enclosed inquiry slip ▲

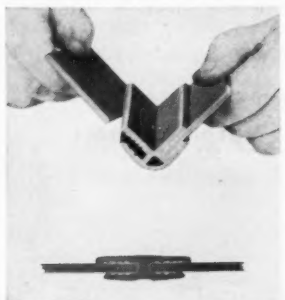
STAINLESS BELLOWS ASSEMBLY allows movement in fluid or gas line



This stainless steel bellows assembly, designed with tandem corrugations, allows movement in stainless steel conduit and piping. It has floating flanges and is suited to water and steam installations. Assemblies are available with fixed flanges or straight necks in diameters from 1 to 6 in. Made by **U. S. Flexible Tubing Co.**, S. S. Products Dept. NED, Bartlett, Ill.

▲ For more details circle NED-726 F8 on enclosed inquiry slip ▲

PVC SHEET-JOINING STRIPS adapt to solvent welding operations



Joining of polyvinyl chloride sheet stock in fabrication of tanks and ducts is facilitated by these joining strips. Both the 90-degree strips for making corners and the H-strips for single-plane joining can be used with 1/8, 3/16, and 1/4-in. gage sheet. They are available in normal and high impact grades in 10-ft lengths. Slots in the strips fit tightly at outside edge to provide their own clamping pressure. Extruded angles for flanging and stiffening fabricated sections are also available in 1 1/2 x 1 1/2 x 3/16-in. and 2 x 2 x 1/4-in. sizes. Made by **Colonial Plastics Mfg. Co.**, Industrial Div., 2686 E. 79th St., Cleveland 4, Ohio.

▲ For more details circle NED-727 F8 on enclosed inquiry slip ▲

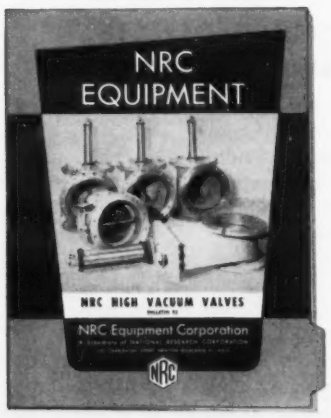
SERVO SYSTEM KIT has 262 breadboard parts

Beckman BP - 101 servo kit measures 18 x 15 x 10 1/2 in. and contains 262 standard parts for precision servo system breadboarding. Small items are stored in a labeled, partitioned plastic box. Parts include two grid plates and hardware, component and shaft hangers, adapters, electric limit stops, Class 2 gears, couplings, hand crank, dial assemblies, terminal blocks and brackets, various lengths of shafting, and a differential. Ball and disc integrators, magnetic clutches, mechanical limit stops, and bevel, miter, spring, and clutch gears are available for use with the kit. Made by **Helipot Corp.**, Dept. NED, Newport Beach, Calif.

▲ For more details circle NED-728 F8 on enclosed inquiry slip ▲

New Vacuum Valve Manual Free

Write for Your Copy!

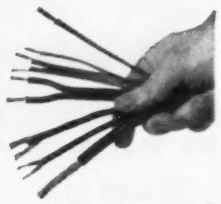


Gives engineering information on types and uses of high vacuum valves. Contains valuable design data on more than 250 valves. Sizes 1/8" to 20" manual and remote operation. Lists wye, globe, angle, slide, ball, air release, throttling and quick connect valves. Write for bulletin No. V2 today!

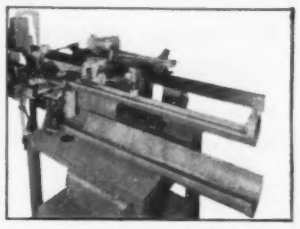
Department 29-T
NRC Equipment Corporation
A subsidiary of National Research Corp.
160 Charlemont Street, Newton 61, Mass.

▲ For more details circle NED-729 F8 on enclosed inquiry slip ▲

ANOTHER TIME AND LABOR SAVER for finishing wire leads with ARTOS AUTOMATIC CS-6



A new collecting device is now available for the popular Artos CS-6 wire-measuring, cutting and stripping machine. Illustration shows the new collecting trough (AE-478). Upper trough collects wire leads up to 60 inches long, then empties them into lower trough after wire has been cut, thus saving operator time.



Production speed of 3000 finished wire leads per hour up to 15 inches long. Maximum cutting length is 194 inches... stripping up to 2 inches on one or both ends. Artos also offers machines that measure, cut, strip and attach terminals at one or both ends.

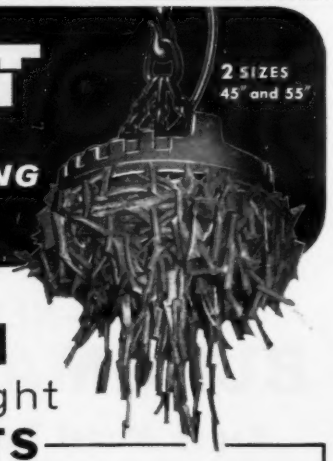
Write for Bulletin on CS-6. Engineering consultation without obligation.

AGENTS THROUGHOUT THE WORLD

ARTOS ENGINEERING CO.
2751 South 28th Street • Milwaukee 46, Wis.

▲ For more details circle NED-730 F8 on enclosed inquiry slip ▲

CUT SCRAP HANDLING COSTS with EC&M Lightweight MAGNETS



2 SIZES 45" and 55"

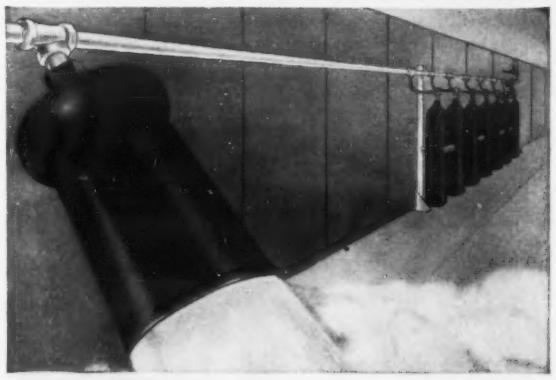
• For fast-moving boom or crawler cranes, these EC&M Magnets (wound with aluminum strap conductor) give high lifts on light (wind-blown) scrap. They keep balers at top output ...place bales into cars...and handle heavier grades of scrap effectively.

Write for BULLETIN 1300

THE ELECTRIC CONTROLLER & MFG. CO.
A DIVISION OF THE SQUARE D COMPANY
CLEVELAND 28 • OHIO

7932-R

▲ For more details circle NED-731 F8 on enclosed inquiry slip ▲



24-HOUR-A-DAY AUTOMATIC FIRE PROTECTION!

Get the finest in fully-automatic fire protection...install a Kidde Carbon Dioxide Extinguishing System! Completely protects any hazard large or small, saves lives, saves equipment. Get full details...send coupon or write today!

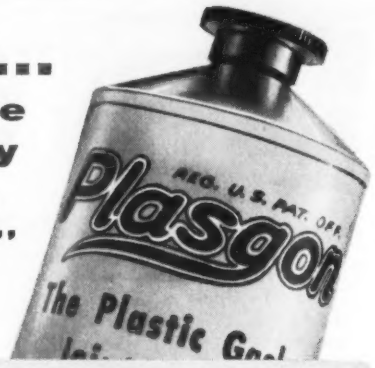
Walter Kidde & Company, Inc.
624 Main St., Belleville 9, New Jersey

Please send me your I-19 catalog plus full information on your automatic carbon dioxide systems.

NAME _____
ADDRESS _____
CITY _____ STATE _____

▲ For more details circle NED-732 F8 on enclosed inquiry slip ▲

now... available in handy 2-oz. "tool kit" size



The perfect sealer for every type joint

- For fuel line joints
- All threaded and flanged connections
- Emergency gaskets

PLASGON® quickly forms a tight seal. Easily applied right from the tube. Impervious to oil, gasoline, kerosene, water, steam, glycol — resists vibration . . . withstands heat to 350°F. A shock-resistant adhesive for porous and non-porous materials. Write for sample.

Sold in 2 oz. and 6 oz. tubes, quarts and gallons

Samuel Cabot

SAMUEL CABOT INC. 632 Oliver Bldg., Boston 9, Mass.

▲ For more details circle NED-733 F8 on enclosed inquiry slip ▲

DRILLS or TAPS

6 *different diameters in* **22** *SECONDS!*

THE NEW BURGMASTER®

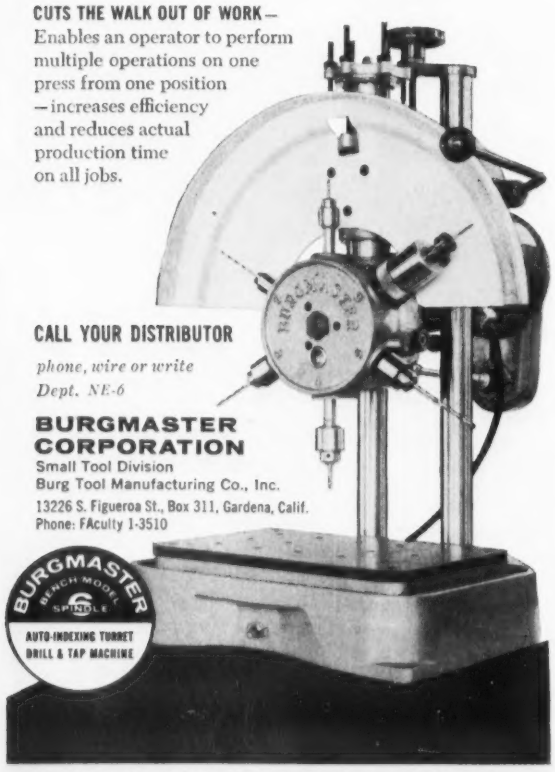
Bench Model Turret Drill
with Power Indexing

INSTANTLY INDEXES ITSELF to each new station for change of hole diameter or tooling. Duplicate operations can also be performed with any spindle *without indexing.*

INDIVIDUAL SPINDLE SPEEDS—Each spindle rotates at its own speed for greatest efficiency with different tool sizes. No belt or gear changes required. Two complete speed ranges between 350 and 6,200 rpm cover 95% of all machining requirements.

6 SPINDLES perform multiple operations in any sequence up to ¼" drill capacity in steel . . . *center drilling, drilling, tapping, reaming, counterboring, countersinking, spot facing, etc.*

CUTS THE WALK OUT OF WORK—Enables an operator to perform multiple operations on one press from one position —increases efficiency and reduces actual production time on all jobs.



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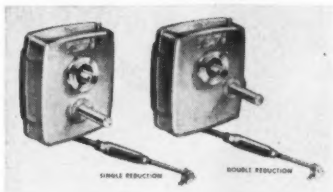
phone, wire or write
Dept. NE-6

BURGMASTER CORPORATION
Small Tool Division
Burg Tool Manufacturing Co., Inc.
13226 S. Figueroa St., Box 311, Gardena, Calif.
Phone: FAculty 1-3510

▲ For more details circle NED-734 F8 on enclosed inquiry slip ▲

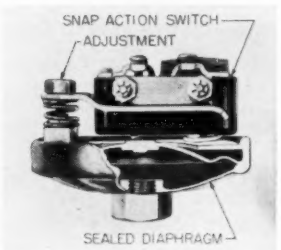
SPEED REDUCERS
¼ to 40 hp shaft-mounted type



High hardness, high capacity Duti-Rated Lifetime gearing is built into this line of shaft - mounted speed reducers. The ¼ to 40-hp units can be equipped with optional adjustable torque arms which protect driven machines, motors, and the reducers from excessive shock and overload by simultaneously loosening the drive belt and interrupting the electrical drive circuit. Single and double reductions are offered with 10 to 420-rpm output speeds at 1750 rpm input using standard V-belt drives. Shaft sizes range from 1 7/16 to 3 7/16 in. Standard size stock bushings adapt the hollow shaft to the drive shaft of equipment. Made by **Foote Bros. Gear & Machine Corp.**, Dept. N, 4545 S. Western Blvd., Chicago 9, Ill.

▲ For more details circle NED-735 F8 on enclosed inquiry slip ▲

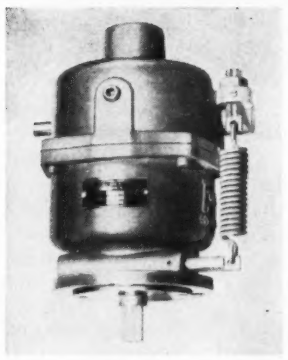
PRESSURE & VACUUM SWITCHES
for liquid, gas, or water systems



Designed for original equipment where controls are enclosed in a common cabinet, stripped Model 402 pressure and vacuum switches operate in any position in liquid, gas, or water systems. Series is available in proof pressures of 30 in. Hg vacuum to 150 psi pressure. Switch accurately senses any system pressure over an adjustable range from 30 in. Hg to 100 psi and actuates an electric circuit at predetermined pressures. The UL-listed single-pole double-throw switching elements for alternating and direct-current circuits are automatically reset by snap action. Made by **Barksdale Valves**, Pressure Switch Div., Dept. NED, 5125 Alcoa Ave., Los Angeles 58, Calif.

▲ For more details circle NED-736 F8 on enclosed inquiry slip ▲

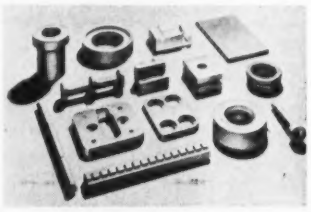
FLYBALL-TYPE GOVERNOR
controls speed of small engines



Speed of small engines can be accurately regulated with the Type 2300 mechanical, flyball - type governor. It is also applicable as an over-speed governor on larger diesel and gasoline engines and on steam turbines used in pumping, air compressing, or electric generating services. Torque capacity is 30 lb-in. at 1200 rpm. Constant speed range is 500 to 2400 rpm, whereas variable speed range is 500 to 1440 rpm. Governor can be supplied with a permanently-attached flexible drive which absorbs cyclic speed variations. Made by **Farris Pickering Governor Co.**, 551 Commercial Ave., Palisades Park, N. J.

▲ For more details circle NED-737 F8 on enclosed inquiry slip ▲

WORKHOLDING DEVICES
custom made from ceramic and lava



Jigs, fixtures, support rings, and workholding devices, custom - made from AlSiMag ceramic or Grade A Lava, afford advantages for applications involving heat, abrasion, impact, and chemical attack. Designs pictured are applicable to induction heating, brazing, welding, soldering, and other manufacturing processes involving high temperatures. Grade A Lava is also available in blocks up to 20 x 12 x 6 in. for experimenting and can be cut with ordinary tools. Completed design can be hardened by heat, or used in the unfired state. For larger quantities, or where particular physical, electrical and chemical factors are present, AlSiMag ceramics provide excellent mechanical strength and dimensional stability. Made by **American Lava Corp.**, Dept. TG, Cherokee Boulevard & Mfgrs. Road, Chattanooga 5, Tenn.

▲ For more details circle NED-738 F8 on enclosed inquiry slip ▲

GREEN ENGRAVERS *are fast!*

- Spindle speeds up to 26,000 rpm to engrave or for machining modern materials
- Fastest possible copy set-up
- Greatest ease and speed of adjustments
- Cutter grinders, rotary tables, master letters, compound slides, name plate blanks and all required accessories

MODEL D2 HEAVY-DUTY 2-DIMENSIONAL

- 575 pounds-rigid, sturdy, precise
- Vertical adjustment of copy table automatic with Pantograph
- Unobstructed on three sides to take large work
- Vertical range over 10 inches
- Micrometer adjustment for depth of cut
- Ball bearing construction throughout — super precision ball bearings in spindle
- Ratios 2 to 1 to infinity — master copy area 26" x 10"

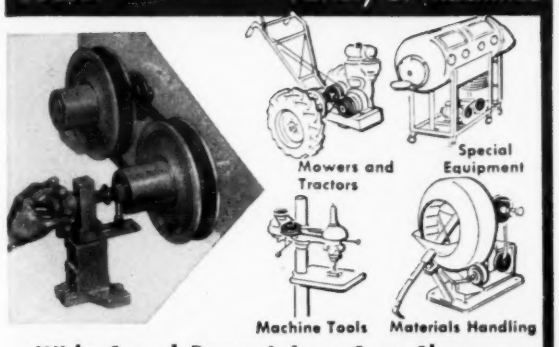
MODEL 106 PORTABLE BENCH MODEL- 2- OR 3-DIMENSIONAL

- 40 pounds of unbeatable speed and accuracy at a reasonable price
- Perfect for all machining applications within its range
- Ball bearing spindle has three speeds up to 14,000 rpm
- 5 positive, accurate pantograph ratios
- One copy carrier (supplied) accepts all master sizes
- Height of pantograph and position of cutter are continuously adjustable
- Work up to 10" by any width
- Taper shank cutters

GREEN INSTRUMENT CO., INC.
375 Putnam Avenue Cambridge, Mass.

▲ For more details circle NED-739 F8 on enclosed inquiry slip ▲

SPEED SELECTOR VARIABLE PITCH SHEAVES
Control Speeds on Variety of Machines



Wide Speed Range! Low Cost Sheaves

Speed Selector Sheaves can give your machines or equipment extra wide-range speed control on fixed centers. Efficient, rugged, simple to use — low in cost! Write for Illustrated Bulletin.

CATALOG FREE! WRITE TODAY

SPEED SELECTOR INC.
P.O. BOX 312-N • CHAGRIN FALLS, OHIO

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"Do you have the NEW CATALOG OF SWECO VIBRATING SCREEN SEPARATORS?"

It tells how SWECO Separators are saving time and money in such diversified fields as petroleum, chemical processing, mining, food processing, stone, clay and ceramics, paper and pulp, drugs, feed, fertilizers, paint and varnish, and many others.

Gives Specs and Screening Data
It shows pictures and describes 22 different models – including 18", 30", and 48" diameter units for high capacity and continuous operation. Also gives case studies and details about SWECO's application engineering and demonstration services.

Write for your copy today!
Ask for Catalog S-203-175.

SWECO SEPARATORS
Southwestern Engineering Company
4800 Santa Fe Avenue, Los Angeles 58, California
Engineers and Constructors . . . Manufacturers

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VACUUM PROBLEM?

LEIMAN HAS THE ANSWER!

- Over 70 years' experience
- Many types, sizes, models
- Engineering representatives in all industrial centers

4-WING TYPE
Vacuum to 20" Hg
Pressure to 15 psig
Volume to 162 cfm

Get Leiman "Lifetime" Construction

Leiman Vacuum Pumps operate 10, 15 and 20 years without trouble or maintenance because they take up their own wear. Fewer moving parts—made of durable cast iron and steel (no composition)—provide higher vacuum and volume, with smaller pump and motor. Run quietly. Every pump tested before shipment. Consult us on your needs. WRITE for 16-page Catalog and 24-page Application Book.

Leiman Bros., Inc.
167 Christie St., Newark 5, N. J.
Established 1887

2-WING TYPE
Vacuum to 29.9" Hg
Pressure to 20 psig
Volume to 40.8 cfm

LEIMAN Rotary Air and VACUUM PUMPS

▲ For more details circle NED-742 F8 on enclosed inquiry slip ▲

All-New PAYLOADER®

Carries 2500 lb. load

NOW AVAILABLE FOR DELIVERY—Hough's new Model H-25 "PAYLOADER" tractor-shovel is in a class by itself in performance and operating ease . . . handles more material per hour at less cost than any other front end loader near its size. These are the reasons:

■ FAST DIGGING—with 4,500 lb. breakout force and 40° bucket tip-back *at ground level,* the H-25 gets a full load fast, even in hard materials.

■ FAST CARRY—power-steering and 6' turning radius lets the H-25 wheel in and out of boxcar doors, around tight corners. Even with a full 2500-lb. load, power transfer differential assures most efficient use of all tractive power. Speeds range up to 11 mph.

■ FAST DELIVERY—2-speed full reversing power-shift transmission with matched torque converter provides operating ease. Fully loaded bucket raises in 3 seconds to dump at 64½" height with 4" higher clearance than average.

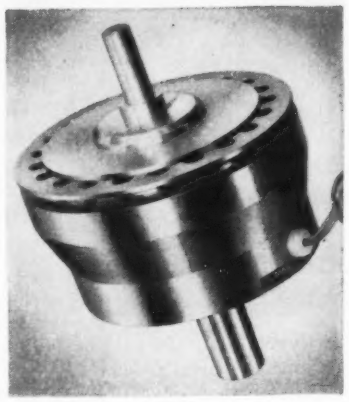
OTHER FEATURES: Gas, diesel or LPG power; closed, pressure controlled hydraulic system; sealed, self-adjusting brakes; triple engine air cleaner; sealed pivot points.

For more information and prices, contact any "PAYLOADER" Distributor or write The Frank G. Hough Co., 746 Sunnyside Ave., Libertyville, Ill.

Modern Materials Handling Equipment
THE FRANK G. HOUGH CO.
LIBERTYVILLE, ILLINOIS
SUBSIDIARY—INTERNATIONAL HARVESTER COMPANY
6-A-2

▲ For more details circle NED-743 F8 on enclosed inquiry slip ▲

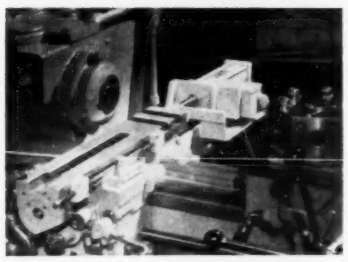
HYSTERESIS CLUTCH
torque rating is 140 oz-in.



Torque of the Model HCS-500 hysteresis clutch can be controlled from 0 up to its maximum rating of 140 oz-in., relatively independent of slip speed characteristics. At a given control current, the slip torque at "stall" will be almost the same as the slip torque at very high dynamic slip speeds, except for minor nonlinear components of eddy-currents and viscous bearing drag. Clutching action is magnetic. Other models which will also employ stationary coils will be available. Made by **Magtrol, Inc.**, 242 Seneca St., Buffalo 4, N. Y.

▲ For more details circle NED-744 F8 on enclosed inquiry slip ▲

TURRET LATHE OPERATOR
controls normal hand functions



Application of the De Silvey Director enables a turret lathe to be operated in any of three ways — fully automatic, semiautomatic, or completely manual. Safety control protects the machine, tools, and workpiece from damage. The operator controls all operations from the control panel. The feed rate ranges from 0 to 100 ipm, and different feed rates can be set up for front or back tool. Headstock spindle speeds, ram, cross slide functions, and all operations are preselected by a six-position drum and multiswitch sequence selector. The six drum positions correspond to the six hex turret positions. Made by **De Silvey Corp.**, 202 Pennsylvania Ave., East Aurora, N. Y.

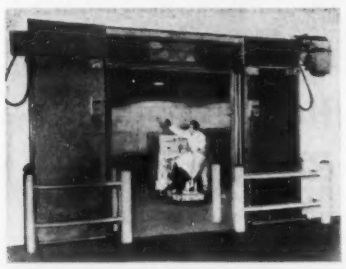
▲ For more details circle NED-745 F8 on enclosed inquiry slip ▲

BONDED RUBBER ROD ENDS
absorb shock and impact loads

An inner member or spacer, an alloy steel eyebolt, and a bonded flexing element of special rubber comprise this resilient rod end bearing. Units provide absorption of shock and impact loads, isolate vibration, require no lubrication, and minimize wear. They are furnished with externally or internally threaded rods, and will accommodate torsional deflections up to ±30 degrees, angular deflections to ±7 degrees. Rod ends weighing less than 1 oz are being produced for rated loads of 15 lb, while units for rated loads up to 40,000 lb have installed weight of about 200 lb. Made by **Lord Mfg. Co.**, Dept. F, 1635 W. 12th St., Erie, Pa.

▲ For more details circle NED-746 F8 on enclosed inquiry slip ▲

POWERED SLIDING DOORS
seal at closing edges, top, bottom



Power - operated Electroglide horizontal sliding doors permit a high volume of industrial truck traffic with a minimum loss of heated or cooled air. They seal not only at the closing edges, but at the top and bottom as well. A cam lock that moves the doors in and down as the leaves close provides compression seals at the edges. Single or double doors are available in sizes from 5 x 7 ft to 10 x 10 ft. Remote control switches, safety edge, lightweight insulation, emergency release padlocking, and level ride opening and closing are featured. Doors are made of 6-in. polystyrene insulation, clad with 26-gage galvanized sheet. Made by **Jamison Cold Storage Door Co.**, Dept. NED, Hagerstown, Md.

▲ For more details circle NED-747 F8 on enclosed inquiry slip ▲

IMMEDIATE SHIPMENT

3 ft. wide, 1 ft. deep, 6' 3" high

PARTS BIN B-614

There once was a mechanic (a good one too) who kept all his tools and equipment in old cheese boxes, which are very inexpensive. He never understood why his employer went broke — poor fellow, he can't understand anything anymore; he went insane.

Who knows? Maybe this 45 compartment tool and parts storage unit may keep your employer out of bankruptcy paying you for looking for things, and you out of the booby hatch. It's cheap insurance at:

$51.26

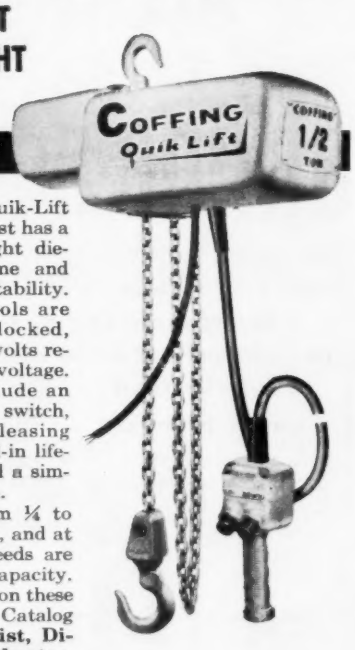
PRICES F. O. B. FACTORY OR WAREHOUSE PHILADELPHIA
COMPLETE BOX SHOP AND SHOP EQUIPMENT CATALOG ON REQUEST
PHONE: BAldwin 9-1805

BAY PRODUCTS INC.
3009 N. 16th Street, Philadelphia 32, Pa.

▲ For more details circle NED-748 F8 on enclosed inquiry slip ▲

NEW Coffing Quik-Lift

ELECTRIC HOIST IS LIGHTWEIGHT BUT STURDY



The new Coffing Quik-Lift coil chain electric hoist has a strong but lightweight die-cast aluminum frame and housing for easy portability. Push-button controls are mechanically interlocked, and operate on 115 volts regardless of motor voltage. Other features include an easily-adjusted limit switch, instantaneously releasing V-type brake, sealed-in lifetime lubrication, and a simplified wiring system.

Models range from ¼ to two tons in capacity, and at least two lifting speeds are available in each capacity. For full information on these new hoists, write for Catalog AD-65. **Coffing Hoist, Division of Duff-Norton Company, 803 Walter Street, Danville, Ill.**

▲ For more details circle NED-749 F8 on enclosed inquiry slip ▲

TESTED & STRUCTURAL PIPE

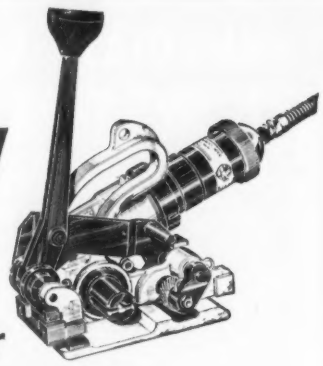
Send for Pipe Catalog NE-6

Especially the hard-to-get items and unusual large quantities, one call to Foster can get you the pipe you need—from one of the nation's largest pipe stocks. Try us for all sizes, ⅛" through 48", all walls—tested and structural, carbon, alloy, PVC and aluminum pipe, valves, fittings.

L.B. FOSTER CO.
PITTSBURGH 30 • ATLANTA 8 • NEW YORK 7
CHICAGO 4 • HOUSTON 2 • LOS ANGELES 5

▲ For more details circle NED-750 F8 on enclosed inquiry slip ▲

NEW Signode Power Stretcher tensions strapping to 3900 pounds!



Here's the heavy-duty power stretcher you'd expect from Signode—the new WN-114—

...get any pre-set tension—3900 lb. at 120 psi; 2100 lb. at 60 psi.

...tensions Signode steel strapping, dry or waxed, up to 1¼ x .050.

...exclusive rolling gripper makes it easy to disengage the strap and greatly increases tool service life.

...tested and proved in 1½ years of actual service.

Send for information. For a demonstration, call the Signode man near you, or write:

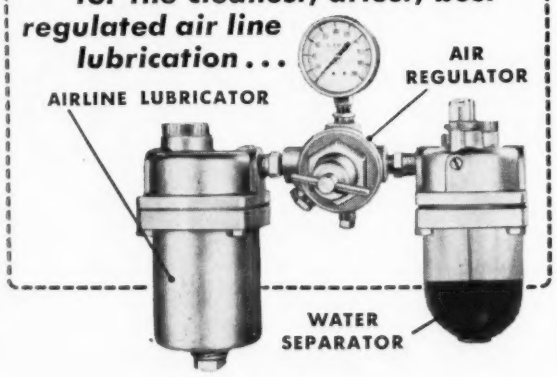
SIGNODE STEEL STRAPPING CO.

2643 N. Western Avenue, Chicago 47, Illinois
Offices Coast to Coast
Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

▲ For more details circle NED-751 F8 on enclosed inquiry slip ▲

ALEMITE "TRI-DUTY" airline controls

ALL-NEW
for the cleanest, driest, best regulated air line lubrication...



ALL-NEW FEATURES OFFER 13 OUTSTANDING ADVANTAGES:

1. **Single Unit Control Lubricator.** Regulates the exact oil output required.
2. **Visual Oil Counter.** Oil sight dome in lubricator permits visual observation and count "per-drop" of lubrication.
3. **Uniform Oil Mixture.** Regardless of air pressure and volume!
4. **Consistent Output.** Oil and air mixture proportionately constant.
5. **Easily Installed.** Straight "inline" pipe connections ... ½" p.t. inlet and outlet ports.
6. **Wide Oil Range.** Handles all viscosities of oil up to 500 SSU at 100° F.
7. **Continuous Operation.** Oil reservoir is refillable while unit is in operation.
8. **Instant Oil Feed.** For intermittent or continuous tool operation – no lag!
9. **Filter Oil Tube.** Removes all contamination from oil passing into air line.
10. **Concentric Venturi Design.** Assures constant, uniform mixture of air and oil.
11. **Contamination-Free Air.** Removable strainer in Air Regulator traps minute dirt particles.
12. **Effective Control of Air Flow.** Air Regulator eliminates excessive pressures and sudden surges.
13. **100% Condensate Removal.** Water Separator removes and automatically dumps 100% of the condensate present in air lines.

Symbol of SW Excellence — ALEMITE DIVISION STEWART-WARNER CORPORATION

1850 Diversey Parkway, Chicago 14, Illinois

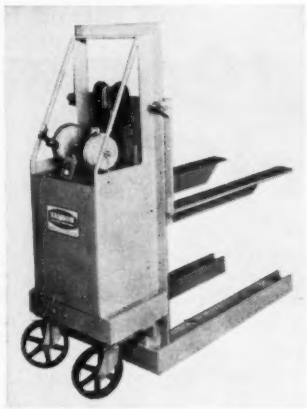
▲ For more details circle NED-752 F8 on enclosed inquiry slip ▲

PIPE LINE COUPLING for portable oil, gas, water lines

Savings in installation, disassembly, and moving of temporary and semi-permanent oil, gas, and water pipe lines can be realized with the use of Fast-Line coupling. Pipe sections are joined by inserting the tube end into the coupling, then turning the lock nut to secure the unit. A two-man crew can make assemblies in 15 to 30 seconds. Coupling is flexible, permitting lines to be installed over uneven contours. Recommended operating pressures are 0 to 600 psi. Available sizes are for 2 and 2½-in. pipe. Made by **McDowell Mfg. Co.**, Industrial Div., 301 Stanton Ave., Pittsburgh 9, Pa.

▲ For more details circle NED-753 F8 on enclosed inquiry slip ▲

LIFT TRUCKS have 5000-lb elevating capacity



Both manually portable and mobile electric - powered models are offered in the Samson line of electro-hydraulic lift trucks. Designed for either fork or platform operations, they have a 5000-lb capacity and standard lift heights from 6 to 68 in. Single or three-phase motors may be specified for 110, 220, or 440 v ac. Lifting mechanism may also be powered with a 12-v dc battery. The latter power option includes a selenium rectifier battery charger. An adjustable flow valve controls both elevating and lowering movements. Loads can be held in any position with the power off. Fingertip or foot controls are offered, either on the machine or remote. Truck has 8-in. rear swivel casters and 5-in. roller bearing front wheels. Made by **General Sales & Engineering Co.**, Dept. NDC, 4525 N. Clark St., Chicago 40, Ill.

▲ For more details circle NED-754 F8 on enclosed inquiry slip ▲

Hack Saw Blade Tensioning

E. H. Wachs Co.—Durable 8½ x 11-in. wall chart is a guide to proper tensioning of power hack saw blades to obtain optimum performance. Reverse side of chart describes the counted turn method of tensioning, while front gives the correct torque wrench settings for different machines and blade combinations.

▲ For more details circle NED-755 F8 on enclosed inquiry slip ▲

How to handle a Redstone Missile

Bassick Grooved Wheel Casters carry the huge U.S. Army Redstone Missile—first stage of the satellite-launching Jupiter C.

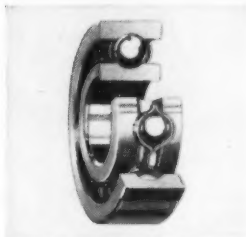
Operating on inverted angle iron tracks, these precision casters keep the missile mobile yet provide positive control. Additional Bassick grooved wheels on a special cradle rotate the missile for easier inspection, tests and maintenance.

In industrial applications these casters are often used on assembly or shipping lines. They protect loads and floors and move equally well on tracks, or floors or both. Where can you use them? THE BASSICK COMPANY. Bridgeport 5, Conn. *In Canada:* Belleville, Ont. 8.35

Bassick — SYMBOL OF EXCELLENCE — MAKING MORE KINDS OF CASTERS ... MAKING CASTERS DO MORE

▲ For more details circle NED-756 F8 on enclosed inquiry slip ▲

PRECISION MINIATURE BEARING IMPROVES COMPONENT PERFORMANCE



Barden Precision SR1-4W .0781 bore, .2500 O.D.

The SR1-4 is a standard *Barden Precision* miniature bearing designed and produced for applications requiring extreme accuracy, low torque, and low eccentricity. It is particularly suited for such components as synchros and potentiometers that demand quick-acting, precise, sensitive response to energy input.

Built to the same dimensional and functional standards as the larger Barden instrument sizes, this *precision* miniature bearing has accuracy and uniformity to meet the most critical requirements, plus performance to match the needs of the application.

Your product needs *Barden Precision* if it has exacting requirements for accuracy, low torque or low vibration . . . if it operates at extreme temperatures or high speed. For less difficult applications, the predictable performance of *Barden Precision* bearings can cut your rejection rates and teardown costs.

Barden Precision bearings are available in a full range of miniature and instrument sizes.

The Barden Corporation, 59 East Franklin Street, Danbury, Connecticut. Western office: 3850 Wilshire Boulevard, Los Angeles 5, Calif.

▲ For more details circle NED-757 F8 on enclosed inquiry slip ▲

DEPENDABLE 100% AUTOMATIC REMOTE READING Tank Contents Gauges

- RELIABLE
- NO POWER REQUIRED
- UNDERWRITERS' APPROVED

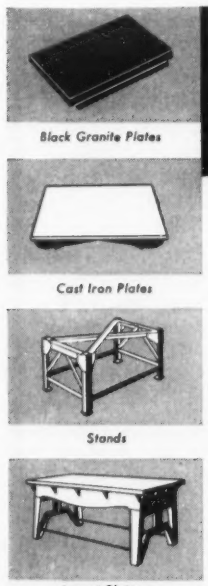
Liquidometers use a temperature compensated balanced hydraulic system. Indications unaffected by changes in specific gravity. All models feature large easy-to-read dials. UL approved switches available.

Write for complete details to Dept. H.

Since 1920 ...of proven quality

THE LIQUIDOMETER CORP.
LONG ISLAND CITY 1, NEW YORK

▲ For more details circle NED-758 F8 on enclosed inquiry slip ▲



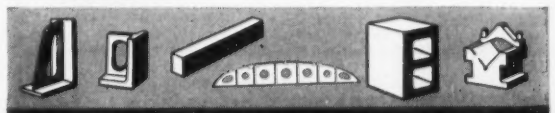
FOR ACCURACY YOU CAN DEPEND ON ... MACHINE PRODUCTS PLATES and ACCESSORIES

Surface Plates — most complete line offered anywhere. Sizes to meet every need, your choice of material . . . super-smooth, wear-resistant black granite or rugged, precision-surfaced cast iron.

Stands — available in sizes for all Machine Products surface plates in two styles . . . as shown, or pedestal type for larger, heavy duty plates.

Layout Plates—designed for layout, inspection or machining operations. Standard sizes available for immediate shipment . . . special sizes on request.

No need for another source for measuring accessories, either, because Machine Products can supply angle plates, vee blocks, parallels . . . whatever you need. Send for your free catalog today.



MACHINE PRODUCTS CORPORATION
6771 E. McNichols Rd. • Detroit 12, Michigan

▲ For more details circle NED-759 F8 on enclosed inquiry slip ▲

Mr. Hi Frequency, the Electronic

THIS electronic sleuth stops the criminal destruction of quality by detecting stray metal particles in your process or production line. Magnetic or non-magnetic metal particles, no matter how deeply embedded, immediately trigger a warning or reject mechanism when they pass the compact Allis-Chalmers metal detector.

This device is economical to operate, permits conveyor speeds to 600 fpm, and is easily incorporated into any production setup. Ask your local A-C man for Bulletin 15B7217B, or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wisconsin.

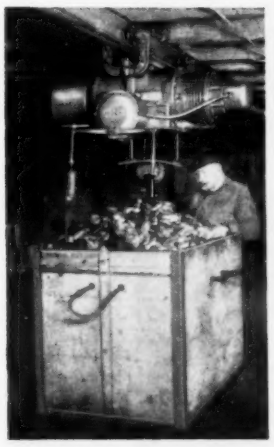
ALLIS-CHALMERS A-C A-5628

▲ For more details circle NED-760 F8 on enclosed inquiry slip ▲

SHEPARD NILES HOISTS

CUT HANDLING COSTS

in YOUR plant with the right hoist

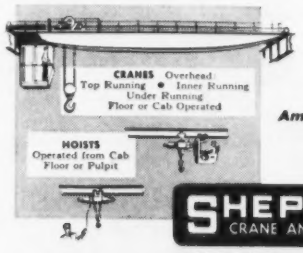


FLOOR-OPERATED HOIST
Operator primarily occupied with other duties, uses hoist for fast, efficient short hauls.

CAB-OPERATED HOIST
Cab operator moves loads at high speeds, can quickly spot material for handling.

WHICH Shepard Niles hoist fits your plant's needs . . . a floor-operated hoist where the operator is freed for other duties or a cab-operated hoist where the operator is engaged full time moving loads through the air? Shepard Niles manufactures both types in capacities from 1 to 20 tons.

Send for the descriptive bulletins on both Cab and Floor-Operated Hoists . . . or ask that a Shepard Niles representative call — there's NO OBLIGATION.

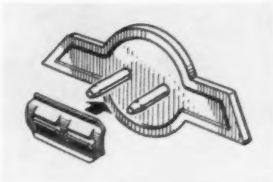


Building America's Most Complete Line of Cranes and Hoists Since 1903

SHEPARD NILES CRANE AND HOIST CORPORATION
1897 Schuyler Ave., Montour Falls, N. Y.

▲ For more details circle NED-761 F8 on enclosed inquiry slip ▲

PUSH-ON FASTENER
for mounting nameplates, emblems



Secure fastening of nameplates, emblems, medallions, and other product identification is achieved with this push-on type Speed Nut. It will accommodate two 3/32-in. studs with center-to-center dimensions from 1/4 to 5/8 in. Fastener is merely pressed by hand over the studs to obtain a vibration-proof grip. Made by **Tinnerman Products Inc.**, Dept. 14, Box 6688, Cleveland 1, Ohio.

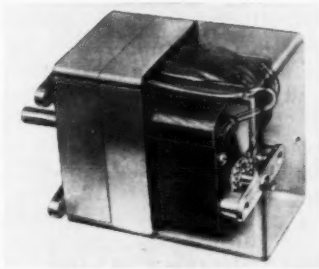
▲ For more details circle NED-762 F8 on enclosed inquiry slip ▲

SOCKET SET SCREWS
offered in steel case kits

Commonly used sizes of cup point socket set screws and keys make up two assortment kits for general plant maintenance. Each kit contains a selection of 50 sizes from No. 4 up to No. 10 and 1/4 in. in diameter. Kit 210 contains hex socket screws, whereas kit 200 contains multiple-spline socket screws. All screws are standard heat-treated alloy steel. Offered by **Bristol Co.**, Socket Screw Div., 30 Bristol Rd., Waterbury 20, Conn.

▲ For more details circle NED-763 F8 on enclosed inquiry slip ▲

SHADED-POLE GEARMOTOR
has clutch for quick stopping



Clutch which disengages the rotor from the output shaft of the Model VW-1 shaded-pole gearmotor permits it to stop instantly. Starting torque is also increased to the equivalent of the running torque by the clutch. Gearmotor is suited for applications requiring a slow or medium speed drive, such as vending machines, instruments, and controls. They have stock motors to provide power up to 1.35 hp in continuous operation. Higher horsepower can be obtained for intermittent duty. Where reversing is required, two motors can be mounted in tandem. Speeds from 1 to 200 rpm and torques up to 50 lb-in. at 20 rpm or less can be obtained. Made by **Von Weise Gear Co.**, Dept. 1, 9353 Watson Industrial Park, St. Louis 19, Mo.

▲ For more details circle NED-764 F8 on enclosed inquiry slip ▲

If you want a simple, compact, infinitely variable speed drive for . . .

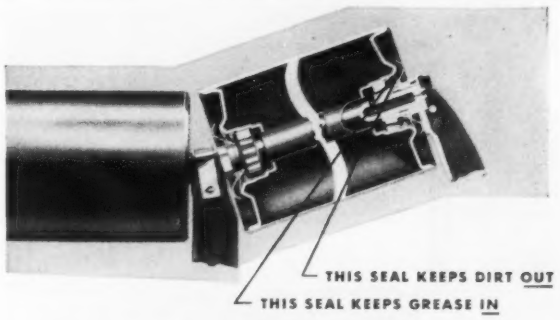
agitators
boring mills
centrifuges
conveyors
cut-off machines
experimental equipment
fatigue testing machines
feed screws
gear pumps
index mechanisms
knitting machinery
laboratory equipment
lathes
metering pumps
mixers
packaging machines
paper machines
pill extruders
plastic machinery
rotating drums
spectrometers
spring making machines
textile process machines
timing switches
transfer machines
vibration testers
washers
welding machines
winding devices
wire drawing machines
yarn rolls
or any one of hundreds of other devices requiring variable speed control

WRITE FOR BULLETIN K-200 FOR FULL INFORMATION ON THE NEW CLEVELAND SPEED VARIATOR

It's quiet, efficient, economical. No belts or complicated linkage. Instant speed change by manual, automatic or remote control.

THE CLEVELAND WORM & GEAR COMPANY
Speed Variator Division, 3283 E. 80th St., Cleveland 4, Ohio
Sales Representatives in all major industrial markets

▲ For more details circle NED-765 F8 on enclosed inquiry slip ▲



Jeffrey **PERMASEAL**® Idlers

give you extra-long service with a minimum of maintenance. Diaphragm double seals protect both ends of every roller. No grease escapes to foul belts; no dirt gets in.

Greater dependability and longer life offset slightly higher initial cost. Catalog 909 tells the complete story.

JEFFREY

THE JEFFREY MANUFACTURING COMPANY
COLUMBUS 16, OHIO

▲ For more details circle NED-766 F8 on enclosed inquiry slip ▲

NEW! MOTORIZED LIFT TRUCK BATTERY CHARGER ELIMINATES SPECIAL WIRING

C&D **AutoReg**® **Silicon Chargers**
A PRODUCT OF C&D BATTERIES, INC. OF CONSHOHOCKEN, PA. ATTICA, IND.

- No special wiring required.
- Plugs into a standard 15-ampere, 60-cycle, 115 v convenience outlet.
- Long, trouble-free life.
- Convection cooled, requires no maintenance.
- No aging adjustments required.
- Can be wall or battery mounted.
- Fully automatic; portable.
- For all 12-volt hand motorized lift truck batteries, up to 660 A.H.

*Trademark

Write for complete details in Bulletin AR-100.

Manufacturers of *Slyver-Clad*® Industrial Batteries. *PlastiCal*® and *PlastiCell* Batteries for Communications, Control and Auxiliary Power

▲ For more details circle NED-767 F8 on enclosed inquiry slip ▲

THERE'S NO SPLINTERING, RUSTING OR CORROSION WITH

Spaulding VULCANIZED FIBRE MATERIALS HANDLING PRODUCTS

RESISTANT to oils, greases, moisture
WITHSTANDS impact and abrasion

Tough, smooth and durable, Spaulding Materials Handling Products last years longer and reduce replacement costs. Investigate the possibilities for improvement that Spaulding has for your materials handling system. Write for free catalog of information on Spaulding's standard and specially made tote boxes, trucks and barrels.

send for FREE catalog

SPAULDING FIBRE CO., INC.
Dover, N. H.

Please send me your free catalog of Spaulding Vulcanized Fibre materials handling products.

Name
Firm
Address
City Zone State

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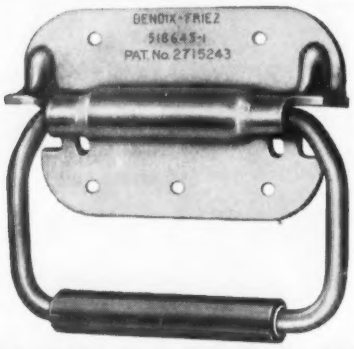


HEAVY-DUTY INDUSTRIAL HANDLE

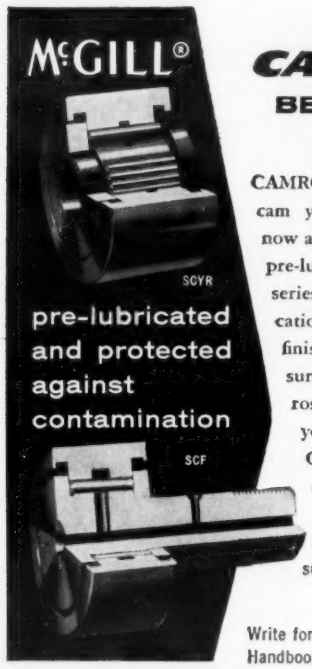
RUST PROOF! SHOCK PROOF! MEETS MILITARY SPECIFICATIONS C-4150A, T-945A

Lifts 200 pounds with adequate safety factor. Special sleeve on grip will not crack, chip, become sticky or tacky in temperatures from −65° to +160°F. Patented design eliminates pinching, holds grip against surface when not in use. Attaches easily. Write for free literature and quantity discounts. Bendix-Friez, 1444 Taylor Avenue, Baltimore 4, Maryland.

Friez Instrument Division

Bendix AVIATION CORPORATION

For more details circle NED-769 F8 on enclosed inquiry slip



sealed CAMROL® BEARINGS

CAMROL cam follower and cam yoke roller bearings are now available in the sealed and pre-lubricated SCF and SCYR series for your critical applications. A black ferrous oxide finish protects all external surfaces from rust and corrosion. For stud-, shaft-, or yoke mounting use sealed CAMROL bearings to avoid frequent re-lubrication and contamination in cam action or guide and support roller applications.

Write for helpful bearing Handbook No. H-54-B

McGILL® *precision needle bearings*

McGILL MANUFACTURING CO., INC.
101 N. LAFAYETTE ST. VALPARAISO, INDIANA

For more details circle NED-770 F8 on enclosed inquiry slip

SPRAY CEILINGS AND OUT-OF-REACH AREAS WITHOUT SCAFFOLDS!

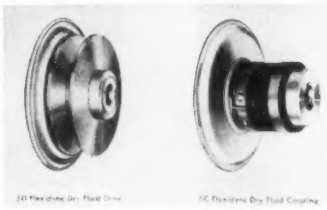
Whether it's ceilings, structural steel, or bridges—you can save time and money painting any hard-to-reach area with a DeVilbiss extension gun. Easy to handle, its swivel head permits spraying at any angle. Spray pattern is adjustable from round to broad fan. Handle is reinforced. Write for data.

FOR BETTER SERVICE, BUY DEVILBISS

THE DEVILBISS COMPANY
Toledo 1, Ohio
Barrie, Ontario • London, England
Branch Offices in Principal Cities

For more details circle NED-771 F8 on enclosed inquiry slip

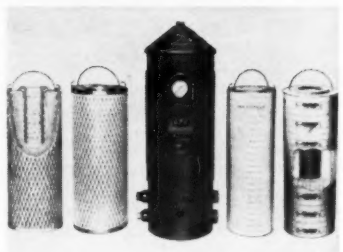
DRIVES & COUPLINGS
fractional hp dry fluid type



Flexidyne dry fluid drives and couplings are now available for 1/4, 1/3, 1/2, and 3/4 - hp, 1750 - rpm motors. They can be used on light machines subject to jam-ups or to enable small motors to handle heavy starting loads. The 5D drives and 5C couplings feature cushioned starting, 100-per cent efficiency at full load, and protection against overload. Drives have a maximum bore size of 3/4 in. and are offered with 5/8 and 3/4-in. standard bores. Couplings have a maximum input bore of 3/4 in. and stock input bores of 5/8 and 3/4 in.; a 1-in. maximum output bore and 1/2, 5/8, 3/4, and 7/8-in. stock output bores. Previously announced Flexidyne drives and couplings range in size from 7 to 15-in. diameters. Made by **Dodge Mfg. Corp.**, 600 S. Union St., Mishawaka, Ind.

For more details circle NED-772 F8 on enclosed inquiry slip

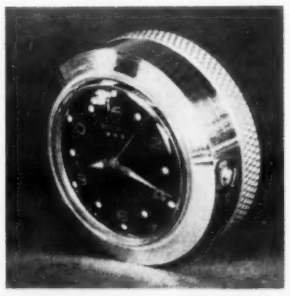
HYDRAULIC FLUIDS FILTER
has two interchangeable cartridges



Hydraulic fluids, fuels, and mineral oils are cleaned to micro-clarity by latest CFC Honan-Crane filter. Two interchangeable cartridges that can be used with the filter are the Flo-Pac 5 for removing solids down to 5 microns in one pass, and the Type K cartridge which utilizes Type T Cranite (fuller's earth) for removing solid and dissolved contaminants. Former is resin-impregnated pleated paper with 6300 sq in. of filtering surface. It is designed for water-base hydraulic fluids, gasoline, and refined diesel fuels. Latter cartridge, designed to JIC standards, removes water, acids, tars, and asphaltenes, as well as solid contaminants. Made by **Indiana Commercial Filters Corp.**, Dept. N, Lebanon, Ind.

For more details circle NED-773 F8 on enclosed inquiry slip

INSTRUMENT PANEL CLOCKS
shock and waterproof for missile use



Manufactured to Military specifications, Type ED instrument panel clock is practical for photographic, recording, and instrument applications. It is made to strict shock-resistant specifications for use in guided missiles and is waterproof and chemical resistant. Made by **PIC Design Corp.**, Dept. NED, 477 Atlantic Ave., East Rockaway, N. Y.

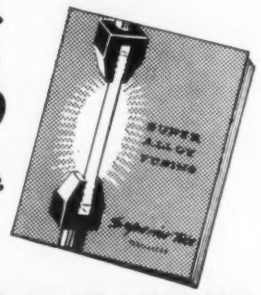
For more details circle NED-774 F8 on enclosed inquiry slip

ULTRASONIC DRILL
cuts shapes into hard materials

Intricate shapes can be rapidly drilled into glass, ceramics, quartz, precious stones, tungsten, carbide, silicon, germanium, and other hard, brittle materials with this 100-w U-602 ultrasonic drill. Particularly useful in manufacture of crystal diodes and transistors, drill can also be used for lapidary work and trepanning operations. Where a number of small, closely spaced holes are to be drilled, a tool can be made to position and drill them simultaneously. Drill assembly consists of Glennite piezoelectric transducer coupled to tool mount by mechanical transformer. Operating on 20 to 22 kc frequency, transducer and impedance matching system provides high cutting speeds. Made by **Gulton Industries, Inc.**, 210 Durham Ave., Metuchen, N. J.

For more details circle NED-775 F8 on enclosed inquiry slip

Send for valuable FREE Bulletin 70 on Super Alloy Tubing



BRAND-NEW information on small diameter tubing of Super Alloys

This bulletin contains data on the properties of these important metals—and includes, among other things, a number of graphs showing the results of stress rupture and tensile tests. You will want a copy for handy reference.

Superior Super Alloy Tubing is being used where requirements are for high strength at high temperatures—in jet engines, missiles, gas and steam turbines, and many other applications in refineries and chemical processing plants. We offer 15 different Super Alloys in tubing form, as well as stainless, carbon and alloy steels, nickel and nickel alloys, beryllium copper and titanium.

For your free copy of Bulletin 70, write Superior Tube Company, 2018 Germantown Ave., Norristown, Pa.

Superior Tube
The big name in small tubing
NORRISTOWN, PA.

All analyses .010 in. to 5/8 in. OD—certain analyses in light walls up to 2 1/2 in. OD

For more details circle NED-776 F8 on enclosed inquiry slip

S.S. WHITE Plastic Plugs and Caps give your product full protection against damage in handling, storing or shipping. Your customers can remove them easily, and your production line will save valuable minutes in installation time. WILL NOT SHRED, leaving debris in your product. THE ECONOMY LINE is of flexible elasto-plastic vinylite . . . retains elasticity; gives a stay-put fit and a non-slip grip. THE QUALITY LINE of rigid acetate is tough, non-brittle, impervious to petroleum-base oils and greases.

FULL PROTECTION • EASY TO REMOVE • EASY TO INSTALL • WILL NOT SHRED

S.S. White PLASTIC PLUGS AND CAPS

A complete range of sizes and types to fit every price range! Write for literature and samples. ASK FOR BULLETIN P-5708. It contains full details on the S.S. WHITE Plastic Plug and Cap line, including sizes, dimensions, etc. (Dept. 7P).

S.S. White PLASTICS DIVISION
10 East 40th Street, New York 16, New York
Western Office: 1839 West Pico Blvd., Los Angeles 6, Calif.

For more details circle NED-777 F8 on enclosed inquiry slip

TIME DELAY OR INTERVAL TIMER
provides new application flexibility in a single unit

The new Cramer Type 412 is a synchronous motor driven timer to control the operation of one or two electrical loads. It can be applied to interrupt the load circuits after a pre-set time interval, or close them after an exact time delay. Available from stock, Type 412 has full-scale ranges from 6 seconds to 24 hours. Actuation can be from either a momentary or a sustained electrical source, with reset either automatic on completion of timing, or delayed, as determined by customer's electrical connections. Standard ratings 115 or 220 volts, 50 or 60 cycles. Open blade contacts are rated 15 amps non-inductive, and will handle up to 40 amps inrush current. Repeat accuracy within ¼ of 1% of full range is maintained over a life in excess of 1 million operations. Write for Bulletin PB-412, and the name of your nearest authorized stocking distributor. Cramer Controls Corporation, Box 28, Centerbrook, Connecticut.

WHEN TIME IS YOUR PROBLEM, CALL CRAMER

▲ For more details circle **NED-778 F8** on enclosed inquiry slip ▲

JELLIFF Wire Mesh

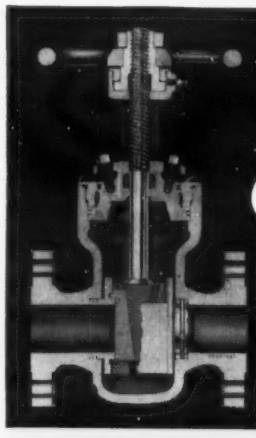
YOU can profit by our 78 years of experience in weaving wire.

YOUR specs, your delivery date, on mesh from 1¼" to 200 x 200—plus a complete line of precise filter weaves.

For information, address Dept. 11

THE C. O. JELLIFF MANUFACTURING CORPORATION SOUTHPORT • CONNECTICUT

▲ For more details circle **NED-779 F8** on enclosed inquiry slip ▲



NEW Revolutionary VAPOR-TIGHT Valve

• OPTIONAL FLOW
• FULL OPENING
• DOUBLE BLOCK and BLEED

Non-Lubricated KEROSEAL® VALVE

For applications in Gas, Petroleum and Chemical Industries

A new concept in valve design gives this versatile Keroseal Valve a vapor-tight seal. It eliminates wear, frictional drag, wiping and consequent galling of seating surfaces. No lubrication is necessary.

Write today for a copy of the new Keroseal Valve Bulletin. KEROTEST

KEROTEST MANUFACTURING COMPANY
2522 Liberty Avenue, Pittsburgh 22, Pa.
In Canada, Kerotest products are manufactured and distributed exclusively by Guelph Engineering Company, Guelph, Ontario.

▲ For more details circle **NED-780 F8** on enclosed inquiry slip ▲

FLASHER WARNING LIGHTS
mechanism is sealed in plastic

Safe to use in areas where explosive vapors are present, these neon and transistor flasher warning lights have an operating mechanism sealed in plastic. Lights are vaporproof and impact resistant. Neon model will operate up to 3 months, 24 hr per day, on a low cost standard battery, while the transistorized model operates 30 to 60 days, 24 hr per day, on two batteries. Neon flasher can be seen from 7000 to 12,000 ft and the other model from 4000 to 5500 ft. Threaded steel insert permits attachment to a stand or barricade. Made by **Pacific Mercury**, Dept. 125, 14052 Burbank Blvd., Van Nuys, Calif.

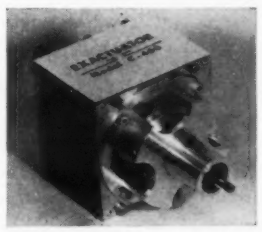
▲ For more details circle **NED-781 F8** on enclosed inquiry slip ▲

TAPE PRINTER & DISPENSER
for thermoplastic-coated paper tape

A 300-ft roll of ½, ¾, or 1-in. wide thermoplastic - coated paper packaging and labeling tape is accommodated by the Thermo-Tayper-Printer. Single-motion pull and cut-off mechanism provides for any one of three cut lengths. The dry tape is printed by quick-change type sleeve with removable type using standard interchangeable Base-Lock mats and type or plates. The type sleeve can be removed so that unprinted, activated tape is dispensed. Tape is activated by an electric heating element, and makes a firm, water-resistant bond on metals, glass, and other difficult-to-adhere-to surfaces. Natural, white, and colored kraft tape papers are available. Made by **Nashua Corp.**, 36 Franklin St., Nashua, N. H.

▲ For more details circle **NED-782 F8** on enclosed inquiry slip ▲

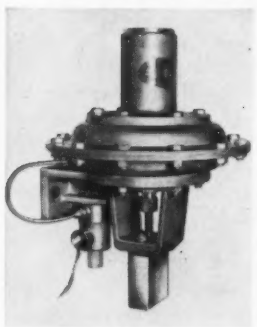
HIGH SPEED CLUTCH-BRAKE
operates within 1 millisecond



Engagement and release times of less than 1 millisecond with full torque of 30 oz-in. at 12-v dc input are featured by the Model C-400 Exactuator clutch-brake. Torque output is linear with respect to voltage input. Operation can be on as little as 1 v, permitting its use with transistors. Devices can be used in clutch-brake combinations, contrarotation clutches, double speed clutches in tape and film feeds, spindle valves, stepping switches, counters, and other motion-controlled devices. Made by **Norman Hardy Associates**, Dept. 5N, Gribbel Road, Wyncote, Pa.

▲ For more details circle **NED-783 F8** on enclosed inquiry slip ▲

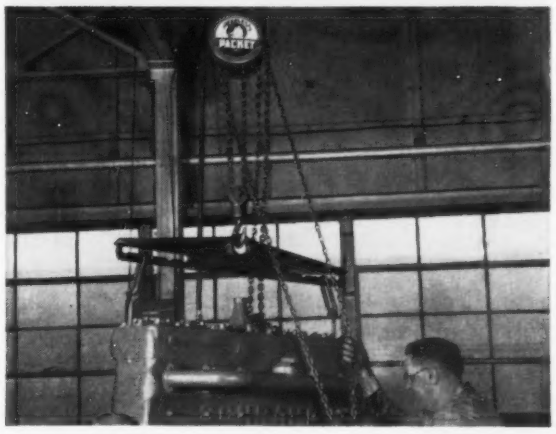
AIR-OPERATED VALVES
control pressures up to 60,000 psi



Air to open — spring to close, spring to open—air to close, and air to open—air to close operations are available in line of Remarco valves for on-and-off high-pressure service. Solenoid pilot controls the 15 to 30 psi air to actuate the diaphragm operator. Control valve is designed to fit all standard HIP valves for 10,000, 30,000, and 60,000-psi in ⅛, ¼, ⅜, ½, and 9/16-in. lines. Valve bodies are Type 316 or 410 stainless steel. Stems and seats are replaceable. Adjustable Micro Switches to determine remote indication of the valve position are optional. Orifice sizes offered are ⅛ and ¼ in. Self-contained mounting bracket is integral with each valve.

A manual over-ride safety feature can be specified for high temperatures. Made by **High Pressure Equipment Co.**, Dept. NED, 1222 Linden St., Erie, Pa.

▲ For more details circle **NED-784 F8** on enclosed inquiry slip ▲



Easy Pull is a laborsaving feature of Peerless Packet Hand Chain Hoists

Prelubricated ball bearings, simplified gearing, and easy-to-grip hand chain links take the strain out of lifting with a Peerless Packet Hand Chain Hoist. A pull of only 42 lb. lifts the maximum load with the ½-ton model, 56 lb. with the 1-ton model, and 60 lb. with the 2 ton. Drop forged heat-treated steel hooks and heat-treated steel chain, strong and flexible, hold the load. Of enclosed design, it withstands rough handling, keeps out dirt, reduces maintenance. For complete information, send for Bulletin P-5.

THE HARRINGTON COMPANY
Plymouth Meeting 16, Pa.

Hand Chain Hoists (¼ to 60 tons) • Electric Hoists (170 to 4000 lb.) • Trolley Hoists (¼ to 12 tons) • Lever Pullers (¼ to 1½ tons) • I-Beam Trolleys (¼ to 20 tons)

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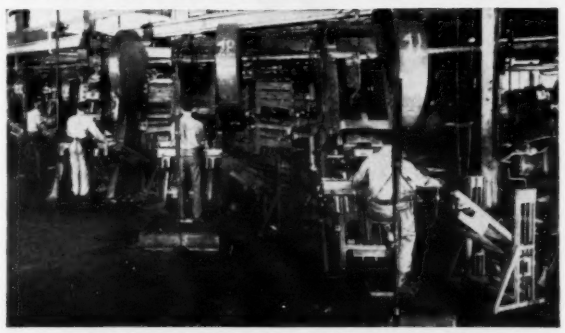
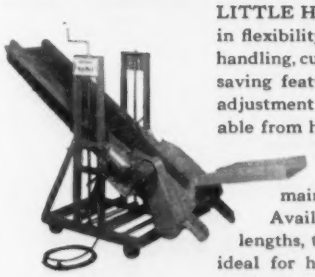
LITTLE HUSTLER CONVEYORS

GIVE MAXIMUM FLEXIBILITY



FOR MANY TYPES OF

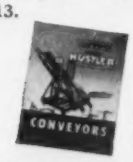
MATERIALS HANDLING JOBS



LITTLE HUSTLER conveyors' built-in flexibility eliminates costly manual handling, cuts production costs. Money-saving features include up and down adjustment . . . conveyor pitch adjustable from horizontal to 45° angles . . . rolls easily from job to job . . . requires minimum maintenance.

Available in various widths and lengths, the LITTLE HUSTLER is ideal for handling a wide variety of small and medium size parts. Write for Bulletin MF-2-413.

MAY-FRAN ENGINEERING, INC.
1711 Clarkstone Road, Cleveland 12, Ohio



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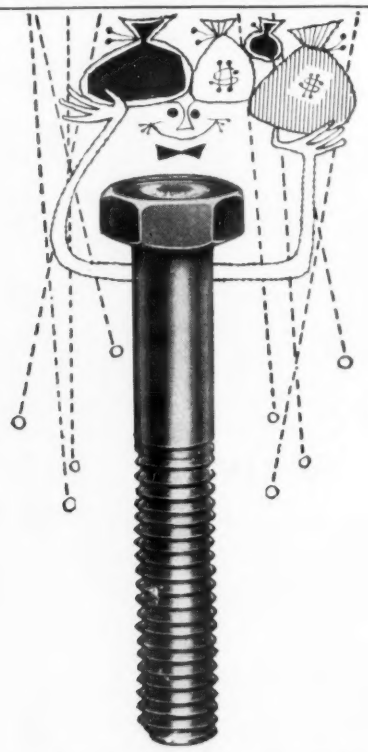
Campbell *

TAGS TAGS
for inventory
TAGS
for shipping
TAGSTAGS TAGS
for identification
TAGS TAGS

* Campbell Box & Tag Company
Main & New Streets, South Bend 23, Ind.

▲ For more details circle NED-787 F8 on enclosed inquiry slip ▲



YOU'LL BE DOLLARS AHEAD WITH ALCOA ALUMINUM FASTENERS

You save dollars when you use Alcoa® Aluminum Fasteners . . . the lowest cost, corrosion-resistant fasteners available. They are a perfect color match for the aluminum products you make, and they insure against both galvanic and atmospheric corrosion. For your requirements, call your nearest Alcoa sales office. Alcoa Aluminum Fasteners . . . in all standard types and sizes . . . are readily available from the complete stocks of your local Alcoa distributor. Look in the Yellow Pages of your telephone directory. Alcoa is a "natural" for specials, too!

ALCOA ALUMINUM FASTENERS

ALCOA THEATRE
Exciting Adventure
Alternate
Monday Evenings.

Your Guide to the Best in Aluminum Value

FREE . . . FACTS, SAMPLES . . . FREE . . . FACTS

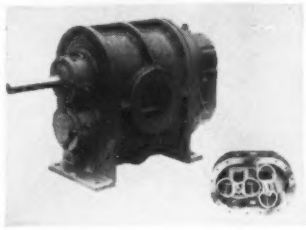
Aluminum Company of America
2245-F Alcoa Bldg., Pittsburgh 19, Pa.

Gentlemen: Please send complete specification data and samples of Alcoa Aluminum Fasteners.

Name_____
Title_____
Company_____
Address_____

▲ For more details circle NED-788 F8 on enclosed inquiry slip ▲

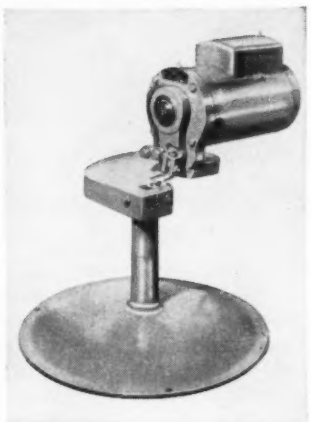
ROTARY BLOWERS
timing hub can be field-adjusted



Maintenance personnel can adjust impeller clearances of the California series of positive-pressure rotary blowers by adjusting their timing hubs in the field without removing the unit from the line. Wide-face herringbone timing gears hold rotating impellers in alignment and minimize lateral thrust under load. Units deliver 10 to 1100 cfm of air or gas at pressures and vacuums of 0 to 10 psi. Larger units with capacities to 20,000 cfm at the same pressures are available. Blowers can be direct-driven through a flexible coupling, or through a V-belt drive for variable speeds. Horizontal design is standard, but vertical design can be specified. Made by **Sutorbilt Corp.**, Dept. NED, 2966 E. Victoria St., Compton, Calif.

▲ For more details circle NED-789 F8 on enclosed inquiry slip ▲

ELECTRIC NIBBLING SHEARS
cut, slit, and trim accurately



Throatless design of these column-mounted electric nibbling shears permits work to be turned in any position so that curved, circular, irregular, angle, or straight cuts can be made. Operation is at 1725 cutting strokes per minute. Model BN-1 has a cutting capacity of 14-gage mild steel, or 18-gage stainless steel. Model BN-2 cuts 10-gage mild steel and 14-gage stainless, and Model BN-3 will cut up to 3/16-in. mild steel and up to 10-gage stainless. Shears are mounted on a 30-in. column and base. Bench base (illustrated) with 5½-in. column is an accessory. Shears, which swivel in a full circle, are powered by 115/230-v, 60-cycle ac heavy duty motors. Made by **Beverly Shear Mfg. Co.**, 3001 W. 111th St., Chicago 43, Ill.

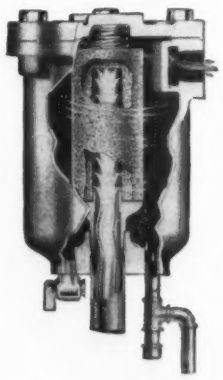
▲ For more details circle NED-790 F8 on enclosed inquiry slip ▲

ABC's of Industrial Heating

Magnethermic Corp.—"3 Minutes with Induction Heating" is title of informative guide to the why's and wherefore's of induction heating. Such subjects as where it is used, why it is used, extrusion, forging, brazing, heat treating, and metal joining are covered. Questions and answers give further understanding of the subject and the equipment involved.

▲ For more details circle NED-791 F8 on enclosed inquiry slip ▲

ADAMS PORO-STONE AIR FILTER,
designed to remove oil, water and foreign matter from compressed air lines with minimum pressure drop.



The R. P. Adams Poro-Stone air filter is engineered to efficiently remove entrained oil, water and pipe scale from compressed air lines. Liquid droplets and solids being carried by the gas stream are first removed by centrifugal action in an annular chamber. Secondary filtration is achieved by passing the air or gas stream through a poro-stone unit. An automatic trap can be provided to discharge the residue from the cyclone chamber.

At rated capacity the filters operate at a maximum pressure drop of only ½ lb., thus insuring delivery of line pressure to the point of consumption.

The units require virtually no service or maintenance—thereby insuring continued trouble-free, low cost performance.

ADAMS Poro-Stone air filters are available from stock in sizes to suit your needs. For further information, write today for Bulletin 117, R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York.

▲ For more details circle NED-792 F8 on enclosed inquiry slip ▲

NEW...TRUSCON STEEL "BUDGET BUILDINGS" save Time, Money and Construction Costs!

This new Truscon Standard Building is attractive, distinctive, smartly styled—designed for community acceptance. It is available for immediate delivery in widths of 32, 36, 40, 44, and 48-feet, 12 and 14-foot heights. Write for latest bulletin.

TRUSCON STEEL DIVISION
REPUBLIC STEEL
1096 Albert Street, Youngstown 1, Ohio

C-4519

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WORM GEARS

NEW BULLETIN CD-700-C free to design engineers

Details of hundreds of matched sets of double-enveloping worm gears. Capacities from fractional to over 1600 hp. Drawings, charts and photos illustrate 16-page booklet.

CONE-DRIVE GEARS
DIVISION MICHIGAN TOOL COMPANY
7171 E. McNichols Rd. • Detroit 12, Michigan

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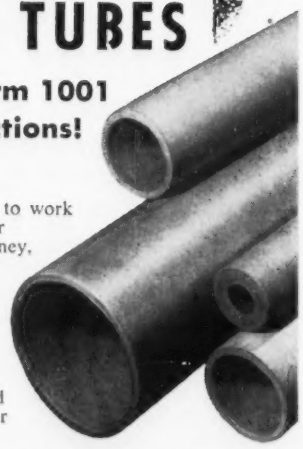
SONOCO PAPER TUBES perform 1001 functions!



Maybe you can put them to work . . . and you may get better performance and save money, too! Thousands of plants are using economical SONOCO paper tubes for a wide variety of purposes. Available in diameters up to 48", in practically any length and wall thickness. Outside and inside finished to meet your requirements.

Think you can use SONOCO *paper tubes? We'll help you decide. Write to—*

SONOCO Paper Products
SONOCO PRODUCTS COMPANY
1605 MAIN OFFICE—HARTSVILLE, SOUTH CAROLINA
PLANTS FROM COAST TO COAST

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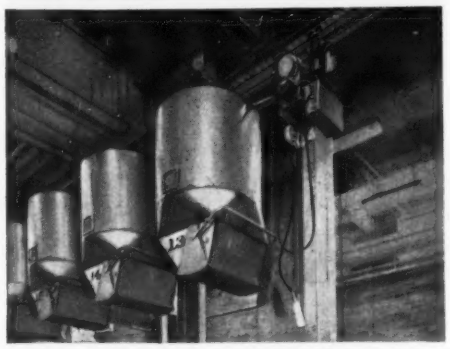

BREAKFAST CEREAL
bulk-transported by
AMERICAN MONORAIL

A leading manufacturer of food products has cut costs by transporting unit loads of bulk breakfast cereal with American Monorail. Ten Monorail trains with 4 hopper cars per train operate near the ceiling. This reduces floor traffic, increases plant safety, and the product is kept clean and free from contamination.

A Monorail system can be installed at your plant that will improve your work flow, increase usable floor space, and reduce your handling costs.

Send NOW for free literature.

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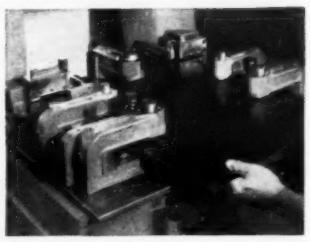
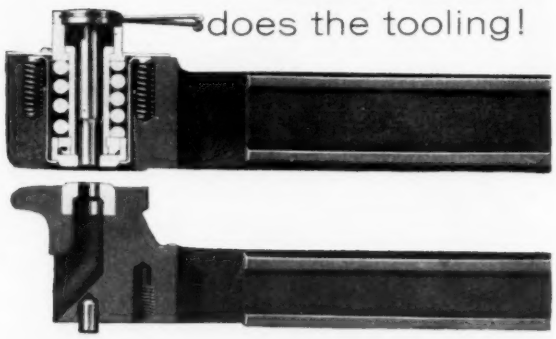
Strippit Punching and Notching Units are easily mounted to templates, T-slotted plates or rails in unlimited patterns for long press runs or quick-change pilot runs. Complete range of standard tools, or "specials" made up on request.



the **bench man** does the tooling!



STRIPPIT multiple punching and notching

THE ABOVE CUTAWAY of a Strippit Punching Unit — one of a wide selection for flats, structurals and extrusions up to ¾" mild steel — illustrates the extreme flexibility, high production and economy of the Strippit system.

NOTE THAT each unit is complete with punch, die button, stripping guide, guide button, lifter assembly and retainers — all quickly interchangeable in a husky holder and actuated by the press ram. Multiple punching — and notching — press setups are easily bench-assembled on drilled mounting templates, with each unit accurately located by the pilot pin in its base. Press down-time is almost negligible in setups of Strippit Punching Units, Notching Units, Punch and Die Assemblies or combinations of all three.

WRITE TODAY for full details and if you wish, a demonstration on your work at your plant by a Strippit mobile unit.

Warehouse stocks in Chicago and Los Angeles.

UNITED HOUDAILLE INDUSTRIES, INC.

WALES STRIPPIT COMPANY
227 Buell Road, Akron, New York

Manufactured in Canada by Strippit Tool & Machine Limited, Brampton, Ontario

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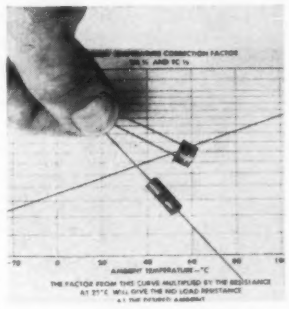
SILICON RESISTOR
is temperature compensating device



Sensistor silicon resistor is a solid state device which responds to an increase in temperature with an increase in resistance that rises rapidly along a stable, retraceable characteristic curve. It has a 0.7 per cent per degree Centigrade positive temperature coefficient of resistance. Wide application is expected as a temperature compensating device in miniaturized amplifiers, servos, computer switching circuits, magnetic amplifiers, and power supplies. It can also be used as a temperature sensing element for automatic controls. Two configurations are available: TM ¼ axial lead-molded device is linearly derated at full load from 100 to 150° C; TC ⅛ device is encased in a TO-5 round-welded package and is derated linearly at full load from 125 to 200° C. Both are available in standard resistance ratings from 100 to 1000 ohms at 25° C. Made by **Texas Instruments Inc.**, Semiconductor-Components Div., Dept. NED, Box 312, Dallas, Tex.

▲ For more details circle NED-798 F8 on enclosed inquiry slip ▲

TURRET INDEXING CHASSIS
provides rotary intermittent motion for special automatic machines

Special automatic machines requiring rotary intermittent motion can be constructed on this Series M turret indexing machine chassis. The chassis is offered with turret diameters from 36 to 54 in. and with a choice of 6 to 32 index positions.

Offered optionally is the umbrella-type tool mounting plate shown which is vertically actuated during the dwell time of the indexing cycle. Plate is rigidly mounted on reciprocating center post. Vertical actuation is mechanical and is provided by means of lift cam coupled to indexing mechanism. A rotating center shaft can also be furnished.

Features include rigid stationary center plate for mounting tooling inside of moving turret, a radial keyed mounting face around the outside to fasten tool mounting brackets, and an extended indexing camshaft for mounting cams to actuate tooling. Made by **Swanson-Erie Corp.**, Dept. PD-33, 808 E. Eighth St., Erie, Pa.

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Rugged, Leakproof, and 40% Savings in Space

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AIR CYLINDERS • HYDRAULIC CYLINDERS • AIR VALVES
ROTARY ACTUATORS • SPECIAL CONTROLS

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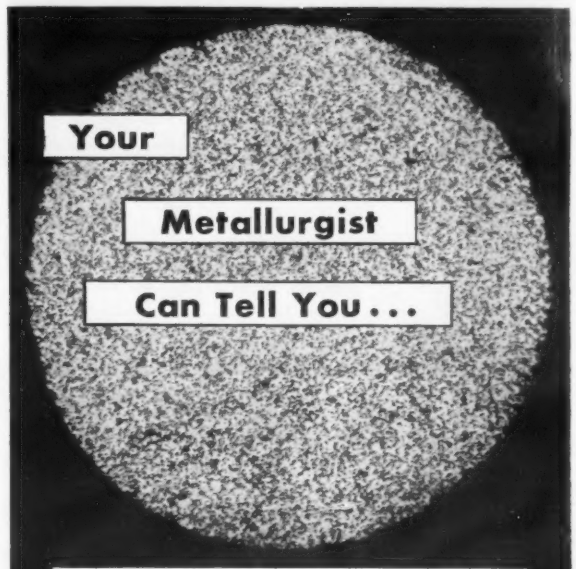

Your Metallurgist Can Tell You . . .

. . . why Webb works where others won't. A lot of the answer is in this photomicrograph of Webb Needle Wire. The concentricity, complete spheroidization and freedom from decarburization shown above spell big fabrication and performance benefits for you.

WEBB WIRE Division of The CARPENTER STEEL CO New Brunswick, N. J.

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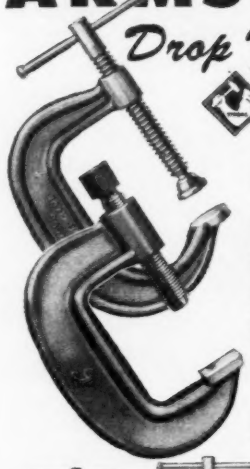
ARMSTRONG
Drop Forged **CLAMPS**



LEADERS IN THE DROP FORGED CLAMP FIELD

. . . in design, machining and strength; in completeness of line in both sizes and types.

Designs are based on a full knowledge of clamp uses and requisites. Drop forging assures die-perfect form, texture toughness and freedom from structural faults. Maximum stiffness is attained by a discerning selection of steels with accurate controlled heat-treating, tempering and testing.

For dependability and long useful life, specify and standardize on ARMSTRONG Drop Forged Clamps.

Buy ARMSTRONG TOOLS from your Industrial Distributor

Write for new ARMSTRONG General Catalog

ARMSTRONG BROS. TOOL CO.
5245 W. ARMSTRONG AVE., CHICAGO 46, ILL.

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use

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- PARTS IDENTIFICATION
- COLOR CODING

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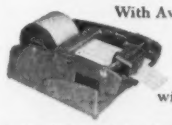
In every department...from receiving to shipping...from receptionist to top management...there are many spots where Avery labels are saving industry thousands of dollars every year. Self-adhesive, they simplify and speed work wherever there's a need to *identify or inform, to warn, mask, inspect, merchandise or price.* You can save *time* and *money* with Avery labels.



With Avery electric dispensers labeling is as much as 5 times faster than with ordinary methods!

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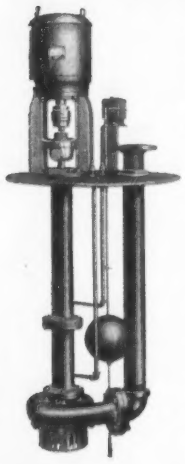
DEMING
VERTICAL SUMP PUMPS



Vertical Sump Pumps . . . single and duplex units, designed for wet or dry pit service. Efficient, dependable with the latest construction and design features.

Deming's complete line of pumps for industrial requirements includes:

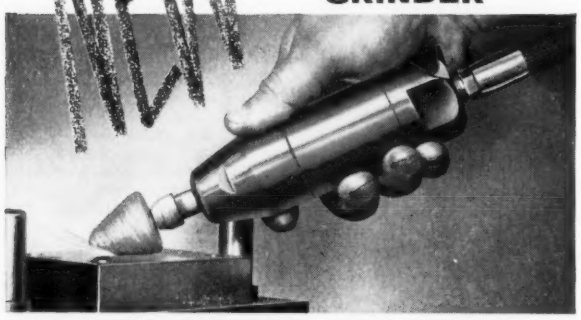
- Vertical Turbine Pumps
- Multi-Stage High Pressure Vertical Centrifugal Pumps
- "Motor-Mount" Centrifugal Pumps
- End-Suction Centrifugal Pumps

For information and detailed specifications, contact your qualified Deming distributor or write:

THE DEMING COMPANY
520 Broadway • Salem, Ohio

For more details circle NED-804 F8 on enclosed inquiry slip

NEW by AIRETOOL . . .
Heavy Duty, Small Wheel Pneumatic GRINDER



Grinding and finishing of dies, patterns, castings or any metal parts can be done quickly and efficiently with this new Airetool pneumatic grinder. It's lightweight and compact for easy maneuvering around intricate construction. Powerful Airetool 3-blade ball bearing motor operates smoothly with constant power. Optional lever or button throttle. Precision ground, hardened metal parts assure long life.

SPECIFICATIONS • MODEL 400G
Speed: 19,000 rpm
Size: 1½" dia. x 6½" long
Weight: 1½ lbs.
Capacity: ¼" collet chuck or ⅜" — 24 spindle
Operating Pressure: 90-100 psi

AIRETOOL
MANUFACTURING COMPANY
SPRINGFIELD, OHIO

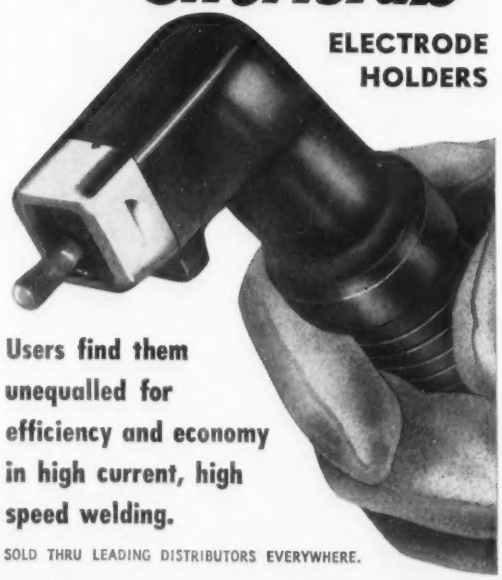
Write for complete catalog on the Airetool line of portable pneumatic equipment for increased production and lower operating costs.

CANADIAN PLANT: Brantford, Ontario
EUROPEAN PLANT: Vlaardingen, The Netherlands

Airetool offices and representatives in principal cities of U.S.A., Canada, Mexico, Puerto Rico, South America, Hawaii, England, Italy, Europe, Japan.

For more details circle NED-805 F8 on enclosed inquiry slip

BERNARD **"Shortstub"**
ELECTRODE HOLDERS



Users find them unequalled for efficiency and economy in high current, high speed welding.

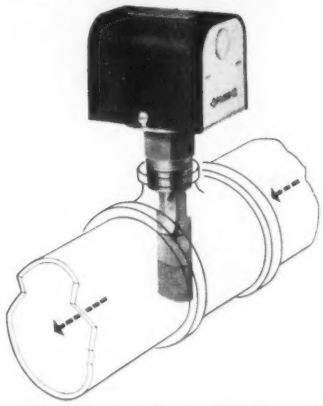
SOLD THRU LEADING DISTRIBUTORS EVERYWHERE.

BERNARD WELDING EQUIPMENT COMPANY
10228 AVENUE N, CHICAGO 17, ILLINOIS

For more details circle NED-806 F8 on enclosed inquiry slip

FLOW SWITCH
installed in horizontal pipe

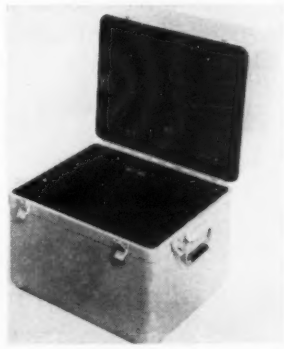
FS4 Series flow switch can be used to activate a signal, pump, burner, alarm, meter, or other equipment when flow of liquid in a pipe line starts or stops. Any flow of liquid in the pipe moves the paddle which closes or opens a circuit to complete or break an electrical circuit, according to model. Compact, easily wired unit is installed in a 1-in. pipe tap. Paddle is assembled in 1-in. segments so that it will fit 1-in. or larger pipe sizes. The switch may be used with any liquid that will not attack its brass, copper, and bronze parts. Four models are offered: Two UL-listed models for line voltage; and two for use with self-generating millivolt systems. Made by **McDonnell & Miller, Inc.**, 3500 N. Spaulding Ave., Chicago 18, Ill.



For more details circle NED-807 F8 on enclosed inquiry slip

INSTRUMENT CASES
stronger units are now waterproofed

Redesign of chevron-shaped seal in line of standard instrument cases makes them completely waterproof under continuous use. Reinforced rim sections assure high strength and secure mounting for stress-loaded external hardware. Neoprene panel gaskets are now furnished with all standard combination cases. With the three new types, line provides 120 basic types and sizes, varying in over-all height from 5 to 40 in. Made by **T A Mfg. Corp.**, 4603 Alger St., Los Angeles 39, Calif.



For more details circle NED-808 F8 on enclosed inquiry slip

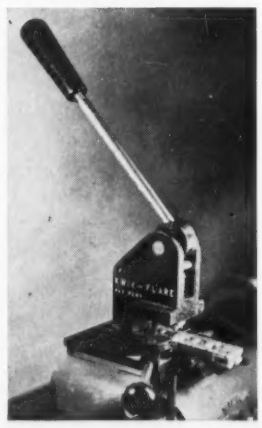
GLASS FIBER TRAYS
for corrosive handling conditions

Mechanical, chemical, and thermal characteristics of Kennett die-molded trays suit them for high temperature and corrosive material handling applications. Made of polyester plastic and reinforced with Fiberglas, they are dimensionally stable under humid conditions and can be used from 45 to 225° F without size change or surface damage. Seamless 14 x 11 x 4-in. trays resist most acids, alkalies, and chemicals, and can be nested when empty. Also available is a lid that can be used separately as a tray. It measures 15 x 12 x 1½ in. Any specified color may be obtained. Made by **National Vulcanized Fibre Co.**, Dept. NED, 1058 Beech St., Wilmington 99, Del.

For more details circle NED-809 F8 on enclosed inquiry slip

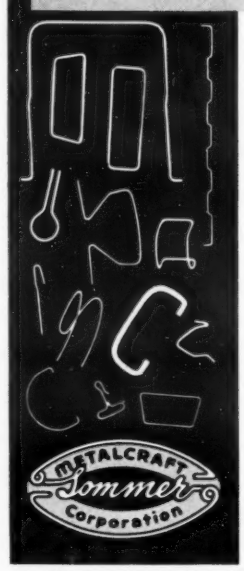
FLARING TOOL
has self-centering flaring cone

Spring-ball tube size selector automatically positions the flaring bar of the Kwik-Flare flaring tool so that uniform flares can be made by its self-centering flaring cone. The flaring operation is accomplished in a few seconds by direct compression through a cam-operated device. Tool produces both 45 and 37-degree flares, as well as double flares. It can be bolted or C-clamped to a bench, or vise-mounted. Made by **J & J Mfg. & Sales Corp.**, Dept. NED, 2491 Mission St., San Marino, Calif.



For more details circle NED-810 F8 on enclosed inquiry slip

Whatever You Need in WIRE SHAPES and FORMS ...ask SOMMER!



Ask Sommer first for whatever you need in precision wire parts or products. We have complete equipment to handle your job from start to finish.

We offer finest facilities for automatic fabrication, flattening and punching, threading, spot and butt welding.

Finishes include baked enamel, cadmium, brite zinc, brite nickel, nickel chrome and mill finishes —in both barrel and fully automatic equipment.

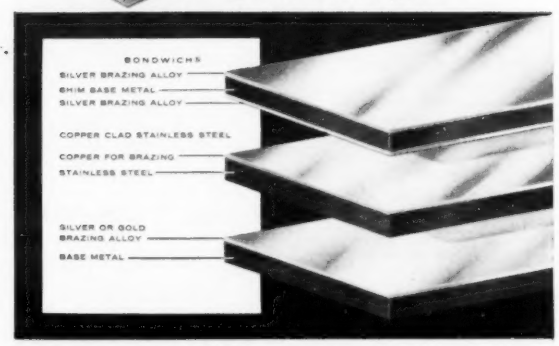
We make our own tools, saving time and money for you.

Tell us your needs. Send sample, blueprint or drawing. We will submit recommendations and quotations promptly.

SOMMER
METALCRAFT CORPORATION
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

For more details circle NED-811 F8 on enclosed inquiry slip

TWO METALS ARE OFTEN BETTER THAN ONE ... and GENERAL PLATE CLAD METALS for brazing are a case in point —



Here's how you benefit by using these metals —

- 100% coverage because brazing metal is completely wetted on parent metal
- Low assembly costs — brazing alloy is already preplaced on metals being joined
- No excess of brazing metal — good appearing joints
- Stronger joints — usually require less thickness of brazing alloy than when separate brazing foil used
- Brazing metals available to suit all types of heating atmospheres

General Plate can supply you with many clad metals made specially for brazing . . . copper clad stainless steel, silver brazing alloys, clad stainless and non-ferrous metals. Also, soft solders clad on nickel and copper. All are made by permanently bonding a solid layer of brazing metal on one or both sides of the parent metal — which can be either base, precious or clad metal. Write for Bulletins.

You Can Profit By Using General Plate Clad Metals.

METALS & CONTROLS CORPORATION
General Plate Division
1806 Forest Street
Attleboro, Mass.

For more details circle NED-812 F8 on enclosed inquiry slip

When you "corner" the market ...do it with SESSIONS!

And when you're in a corner for any type of Armed Forces and Transit Case Hardware as well as Stampings and Stamped Assemblies see

Write for literature or quotations.
J. H. SESSIONS & SON
289 Riverside Ave.
Bristol, Conn.

J. H. SESSIONS & SON
FORMING • ASSEMBLING • FINISHING

For more details circle NED-813 F8 on enclosed inquiry slip

What other tool companies consider "SPECIALS"
(IN DECIMAL SIZES)

WE STOCK AS STANDARD

Thousands of chucking and Stub Reamers by the .001 in Stock ready for the precise job. Why buy or make "SPECIALS" when you can BUY from STOCK — over night.

SUPERREAM

IN EMERGENCY
Telephone
Libertyville 2-4200

TWENTIETH CENTURY MANUFACTURING CO.
BOX 429 NED LIBERTYVILLE, ILL.

▲ For more details circle NED-814 F8 on enclosed inquiry slip ▲

Telephone privacy of home—
in the noisiest places

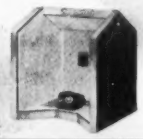
Model 211

Model 45

Model 455L

Yes, you can talk and hear with the comfort of home right next to a forge press, in the center of the noisiest lobby in town; in a hissing, clanging rail terminal; or any other noisy location if you are phoning in a Burgess-Manning "Acousti-Booth" (the original isolation booth). It is designed to highest acoustical standards, which have been developed thru many years of research and development. Extraneous noises are eliminated—no understandable conversation escapes thru the doorless opening of the "Acousti-Booth." Its unique, doorless design prevents accumulation of foul odors—there are no corners to collect rubbish—no maintenance. Be sure you have a genuine Burgess-Manning "Hear-Here" Acousti-Booth for greatest telephoning convenience—a model for every purpose.

Performance Guaranteed
For description and prices on all models — write for Bulletin A-142-2D



Model 602

Heating Cooling Acoustics

BURGESS-MANNING COMPANY
Architectural Products Division
5970 Northwest Highway, Chicago 31, Ill.

▲ For more details circle NED-815 F8 on enclosed inquiry slip ▲

SALT TABLETS
vitamins B_1, B_2, and C added

Original Pep-Up impregnated salt tablets are now available with vitamins B_1, B_2, and C added. One tablet will not only help replace lost body salt, but provides minimum adult requirements of these three vitamins. Physical efficiency reportedly is thus improved two ways. Tablets are offered in 500 and 1000-unit expendable plastic dispensers which are both sanitary and weatherproof. Made by **United States Safety Service Co.**, Dept. NED, 1535 Walnut St., Kansas City, 8, Mo.

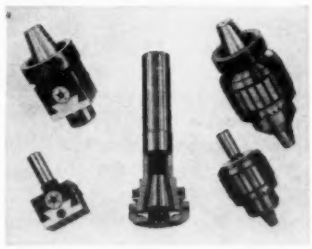
▲ For more details circle NED-816 F8 on enclosed inquiry slip ▲

SPLINE-ROLLING MACHINE
for thin-walled tubular parts

Splines and serrations can be rolled on thin-walled tubular parts by the Roto-Flo process, developed for Roto-Flo cold-rolling machines. Tubing as well as solid shaft parts from ½ to 2 in. OD can be accommodated. Reciprocation of the new cylindrical forming racks is combined with an axial feed of the blank to cold roll splines of any reasonable length. Splines and serrations up to 12 in. have been rolled on tubular parts having as little as 0.075 in. from root of tooth to the inside wall of the tube. As wear occurs on the round forming racks, they are rotated in the holder to bring an unworn portion of the forming teeth into use. Made by **Michigan Tool Co.**, 7204 E. McNichols Rd., Detroit 12, Mich.

▲ For more details circle NED-817 F8 on enclosed inquiry slip ▲

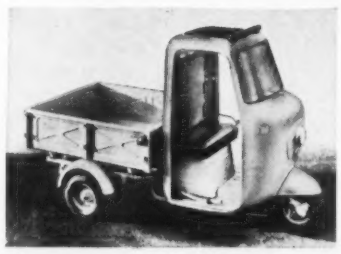
COLLET & TOOL HOLDER
installed on Linley jig borers



Improved collet and tool holder set-up installed on all Linley jig borers contributes to fast operation and concentricity. Holder uses a split tapered collet with a compensating washer and locknut in a tapered spindle bore. True concentricity of tools and toolholders is achieved through the action of a free-riding compensating washer without dependence on the locknut alignment. Collet itself has a long taper bearing surface that minimizes tool chatter. Drill chucks and small boring heads with straight shanks are interchangeable without changing collets. Made by **Linley Brothers Co.**, 684 State St. Ext., Bridgeport 1, Conn.

▲ For more details circle NED-818 F8 on enclosed inquiry slip ▲

THREE-WHEEL UTILITY VEHICLE
closed panel and open pick-up models carry 750 lb at 40 mph



Used for delivery and pick-up operations, the Lambretta 150 FD-c three-wheel utility vehicle can carry 750-lb loads at over 40 mph, while delivering 75 mpg of gasoline. Maintenance-free main shaft drive has synthetic rubber universal joint connected to heavy-duty rear end and a differential.

Other features are an air-cooled, 148-cc, one cylinder, two-cycle, 6-hp engine; high torque gear ratios; three forward speeds; reverse gear; rear wheel hydraulic brakes; hand operated starter; emergency brake; and steering wheel damper. Closed panel model provides 37 cu ft of carrying space and has locking doors. The open pick-up truck has 13-sq ft body with 1-ft sidewalls. Units are priced at $1186 and $1010, respectively. Distributed by **Innocenti Corp.**, Dept. NED, 45 Columbus Ave., New York 23, N. Y.

▲ For more details circle NED-819 F8 on enclosed inquiry slip ▲

for a HEAVY DUTY switch to best fit your needs . . . pick a

The HERCULES
Rugged safety-guarded cast-iron enclosure. Momentary or maintained. 40 Models to choose from.

The SENIOR
Fully enclosed and hooded for protection against dirt and chips. AC and DC ratings.

LINEMASTER

AMERICA'S FOOT SWITCH LEADER

The CLIPPER
Long-lasting snap-action switches with momentary or maintained action. High electrical ratings. SPDT and simulated DPDT contacts.

More than 75 different models of all kinds . . . momentary and maintained contact types, 2-in-1 switches, single, double and triple pole. Light, medium and heavy duty versions, with and without safety guards.

Write for complete catalog or let us quote on your special switch requirements.

LINEMASTER SWITCH CORP.
424 Woodstock Terrace
WOODSTOCK, CONNECTICUT

▲ For more details circle NED-820 F8 on enclosed inquiry slip ▲

ELIMINATE DEADLY SLIPPING HAZARDS with A.W. ALGRIP

ALGRIP, world's only abrasive rolled steel floor plate, provides super-safe footing under the most hazardous slipping conditions, including those caused by oil, water and grease—on flat or *inclined surfaces.*

Thousands of abrasive particles, which have been rolled—*not coated*—to a controlled depth as an integral part of steel plate, give powerful gripping action. Wear and tear exposes more abrasive.

Make a test installation and watch accident and insurance rates go down. ALGRIP fabricates easily and gives many years of economical service under heavy use. For complete information write on company letterhead to Dept. AL-E28.

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALGRIP—*approved for safety by Underwriters' Laboratories*

ALAN WOOD STEEL COMPANY
Conshohocken, Pa.
Other Products: A.W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates—Sheets—Strip—(Alloy and Special Grades)

▲ For more details circle NED-821 F8 on enclosed inquiry slip ▲

anywhere *any time*

the **TUCK-AWAY** *table is ready in seconds!*

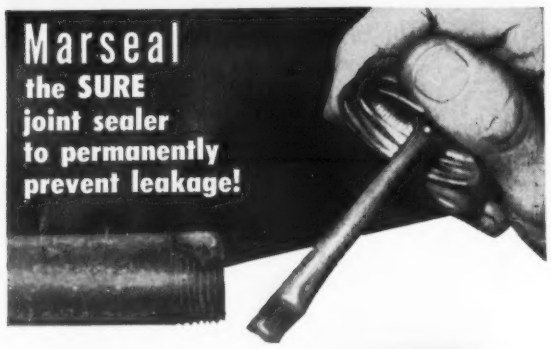
Now, any room becomes a recreation area quickly, easily . . . with the TUCK-AWAY *folding* tennis table. The TUCK-AWAY is built for lasting service, minimum storage requirements, and speedy, *safe* operation. Finished in flat green with white court lines, the TUCK-AWAY is regulation size and features "Floating Fold" for easy, positive action. So safe a child can operate it; so sturdy it's guaranteed for ten years!

new **FREE** *booklet*

. . . tells the complete story on the TUCK-AWAY. Write for your copy today!

SICO
manufacturing company, inc. Dept. 515
5217 EDEN AVENUE SOUTH, MINNEAPOLIS 24, MINNESOTA

▲ For more details circle NED-822 F8 on enclosed inquiry slip ▲



Try it! You'll agree no other pipe thread and joint sealing compound seals like Marseal.

Marseal makes a permanent, solvent-proof flexible connection that lasts until taken apart. It is guaranteed!

- Insoluble in gasoline, oils, kerosene, L-P gas, refrigerants, chlorinated hydrocarbons
- Makes permanent joints — easy to take apart.
- Withstands pressure and vibration.

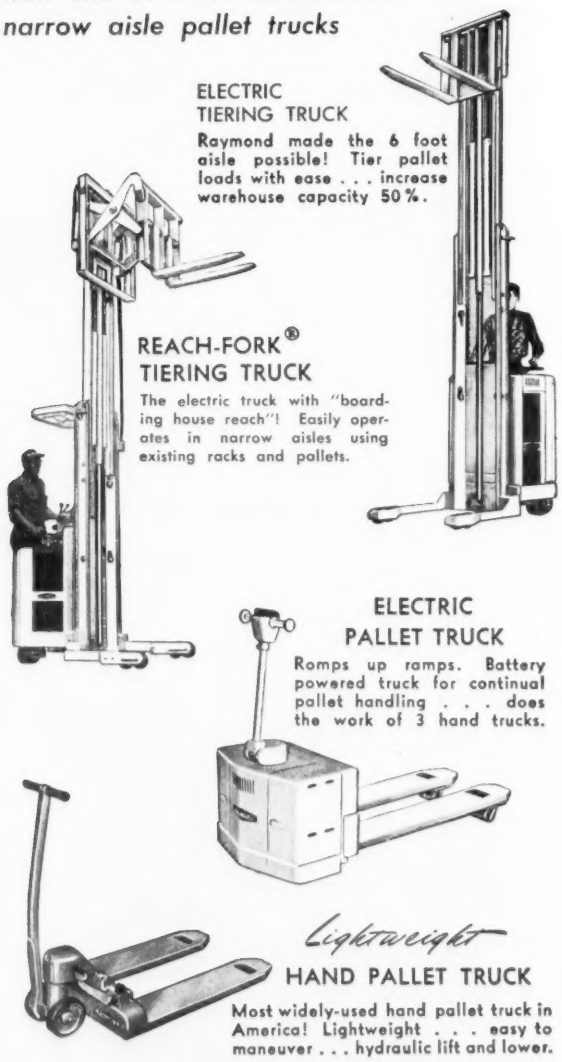
Write now for complete information and your special introductory offer!

MARGATE MANUFACTURING CO
MARGATE, NEW JERSEY

▲ For more details circle NED-823 F8 on enclosed inquiry slip ▲

GAIN SPACE!

with one of these RAYMOND narrow aisle pallet trucks



ELECTRIC TIERING TRUCK

Raymond made the 6 foot aisle possible! Tier pallet loads with ease . . . increase warehouse capacity 50%.

REACH-FORK® TIERING TRUCK

The electric truck with "boarding house reach"! Easily operates in narrow aisles using existing racks and pallets.

ELECTRIC PALLET TRUCK

Romps up ramps. Battery powered truck for continual pallet handling . . . does the work of 3 hand trucks.

Lightweight HAND PALLET TRUCK

Most widely-used hand pallet truck in America! Lightweight . . . easy to maneuver . . . hydraulic lift and lower.

Send for Details

The RAYMOND CORPORATION

4167 Madison St., Greene, N. Y.

Send FREE RAYMOND Bulletins:

☐ Lightweight Hand Pallet Truck ☐ Electric Tiering Truck
☐ Electric Pallet Truck ☐ Reach-Fork Tiering Truck

NAME TITLE
COMPANY
STREET
CITY STATE

▲ For more details circle NED-824 F8 on enclosed inquiry slip ▲

New Literature and Catalogs

Rubber & Vinyl Parts

Ohio Rubber Co.—Facilities and capabilities of this company to produce rubber and plastic components to meet customer's specifications or engineered to specific service requirements are described in 6-page bulletin "Component Customeering." Representative parts are shown and typical applications are listed.

▲ For more details circle NED-825 F8 on enclosed inquiry slip ▲

Dew Point Meter

Illinois Testing Laboratories, Inc.—Details of the Alnor Dewpointer for determining the dew point of any gas sample are given in 8-page Bulletin 2051. Two new models have been added to line to simplify the measurement of gases under pressure.

▲ For more details circle NED-826 F8 on enclosed inquiry slip ▲

Cooling Towers for Industry

J. F. Pritchard & Co.—With industry increasingly faced with water shortage as a critical factor in processing, manufacturing, and comfort conditioning, the information given in Bulletin 4.9.080A is particularly timely. Described are counterflow cooling towers for industry. They can be constructed of modular cells to meet any cooling water requirement.

▲ For more details circle NED-827 F8 on enclosed inquiry slip ▲

Woven Wire Slings

Cambridge Wire Cloth Co.—Gripper woven wire or metal mesh slings are designed to handle, without marking or slipping, all types of products ranging from pipe and bars to boats and bricks. How to select the right type and size for any materials handling operation is explained. Special constructions, coverings, and designs are shown, also.

▲ For more details circle NED-828 F8 on enclosed inquiry slip ▲

Precision Stamped Gears

Illinois Tool Works, Fastex Div.—Listed in 20-page manual are thousands of precision stamped gears for practically any need. Major applications, size limits, materials, and finishes are covered. Also presented are gear design suggestions, time savers for gear procurement, basic gear dimensional data, gear-tooth formulas and terms, and details of antibacklash types.

▲ For more details circle NED-829 F8 on enclosed inquiry slip ▲

Wire Rope Guidance

H. K. Porter Co., Leschen Wire Rope Div.—"How to Be a Wire Rope Expert" is a 16-page well-illustrated guide for anyone who buys, sells, or uses wire rope. Basic principles governing the selection of the proper wire rope construction for any job are clearly stated in layman's language. All factors relating to wire rope life, use, performance are discussed.

▲ For more details circle NED-830 F8 on enclosed inquiry slip ▲

Steel Chain

Taylor-Wharton Co.—16-page illustrated bulletin "Tisco Manganese Steel Chain" describes various types of chains which become work-hardened with use. Special lightweight rivetless and detachable chains are covered, as are sprockets and traction wheels.

▲ For more details circle NED-831 F8 on enclosed inquiry slip ▲

Magnetic Drive

Whitney Chain Co.—Whitney-Tormag magnetic drive in ratings from 1 to 15 hp at 1750 rpm is subject of 8-page Bulletin W-T 2-57. Drive is self-contained, affords overload protection to motor or prime mover, and allows motor to reach operating speed before load is applied. It also can be used as a dynamic brake.

▲ For more details circle NED-832 F8 on enclosed inquiry slip ▲

Filters for Every Purpose

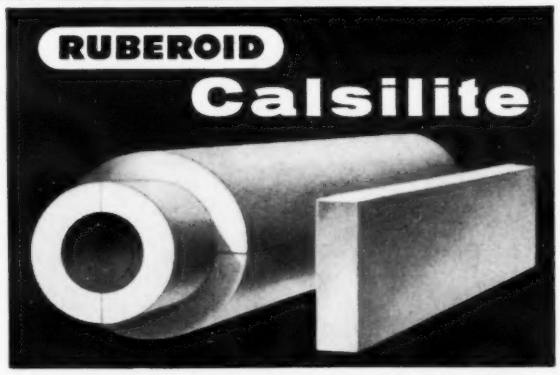
Fram Corp.—Three illustrated catalogs contain performance and application information on original equipment and replacement filters for liquids and gases. "General Products Catalog" contains 16 pages of data on oil, fuel, and water filters; kits; lines; fittings; parts; and accessories. The 36-page "Air Filter Catalog" includes comparative charts on engine wear with Filtronic air filters and with oil bath and oil-wetted air cleaners. Specifications are given on air filters and cartridges. The 76-page "Filter Specifications Catalog" includes oil and air filter cartridge cross reference, replacement data, and installation information on car and truck filters.

▲ For more details circle NED-833 F8 on enclosed inquiry slip ▲

For the magnets you need, when and as you need them—call PERMAG. All shapes, sizes and grades in stock. 24-hour delivery. Write for catalog.

PERMAG CORP.
210 TAAFFE PLACE, BROOKLYN 5, N. Y.

▲ For more details circle NED-834 F8 on enclosed inquiry slip ▲



ONE-LAYER INSULATION FOR THE FULL TEMPERATURE RANGE UP TO 1250°F!

Modern calcium silicate insulation for use on today's high temperature pipes and vessels. Available in various thicknesses of pipe coverings and blocks.

- Light weight, easy to cut and apply
- Insoluble in water, normal acids and alkalis
- Absorbs moisture without disintegrating
- Constant co-efficient of conductivity

For complete details, write:

The RUBEROID Co.
INDUSTRIAL PRODUCTS DIVISION
500 Fifth Ave., N. Y. 36, N. Y.
PIONEERS IN CALCIUM SILICATE INSULATION

▲ For more details circle NED-835 F8 on enclosed inquiry slip ▲

The best sheet metal ROLLER LEVELER ever built!

WOEHR ROLLER LEVELERS

(in several standard models) flatten steel, aluminum, brass and copper in widths up to 60" . . . in gauges .010 to .125! Your fabricating capacity and efficiency are increased *immediately!* Safe, one-man operation is simple and accurate.

Send for FREE BOOKLET. Our brochure gives complete specifications and data. Write for your copy TODAY.

f. a. WOEHR machine co.
9A FAVOR STREET · ROCHESTER, NEW YORK

▲ For more details circle NED-836 F8 on enclosed inquiry slip ▲

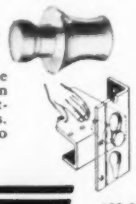
strong as a weld

EQUIPTO
Iron-Grip®
Steel Shelving
with the exclusive stud

Exclusive steel stud permits 60% faster shelf adjustment on 1½" centers without nuts, bolts or tools. The more you load the shelf the tighter it grips, yet shelf may be moved easily.

Equipto Iron-Grip Shelving is immediately available from stock in all sizes, either open or closed, with or without dividers, bin fronts, drawers or label holders. Write for complete reference manual No. 485.

Stud eliminates clips, nuts, bolts and tools

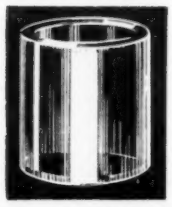


A slope in the keyhole joins with the taper on the stud to form the tightest and strongest of grips. An exclusive Equipto feature.

Equipto
690 Prairie Avenue
Aurora, Illinois
Manufacturer of World's Finest
Steel Shelving - Parts Bins - Drawer Units - Lockers - Carts - Work Benches.

▲ For more details circle NED-837 F8 on enclosed inquiry slip ▲

SWIFT
carries a complete stock of



GAUGE GLASS
and
CYLINDERS

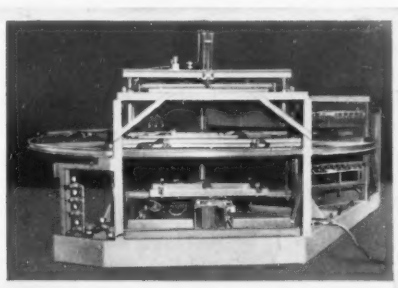
Need Gauge Glass or Cylinders in a hurry? Then write, wire or phone Swift for immediate delivery.

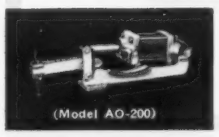
We have a complete stock of Pyrex Tubular Gauge Glass and Cylinders on hand for chemical, pharmaceutical or industrial applications. Supplied in any length or finish from 2 mm. O.D. to 7" O.D.

SWIFT Glass Division
SWIFT LUBRICATOR COMPANY, INC.
5 Glass St., Elmira, N.Y.

▲ For more details circle NED-838 F8 on enclosed inquiry slip ▲

COOL IDEA




(Model AO-200)

FOR REFRIGERATOR MANUFACTURERS

Knu-Vise air-operated clamps are featured on a new 3-station automatic machine developed by the Brown Machine Company, Beaverton, Michigan, for vacuum forming inner door panels and other refrigerator parts at a maximum production rate.

The machine is completely automated with air clamps, mold table, vacuum system and fans, and rotating mechanism all operating from a single switch. 100 panels per hour—as big as 42" x 72"—can be produced.

Quality standards are so high that only dependable Knu-Vise air-operated clamps can be used. Take a tip—investigate Lapeer today!

Manufacturers of over 150 models of manually and air-operated clamps and pliers

KNU-VISE PRODUCTS LAPEER MANUFACTURING CO.
3062 DAVISON ROAD
LAPEER, MICHIGAN
WESTERN DIV.: PECK and LEWIS CORPORATION 4436 Long Beach Ave., Los Angeles 58, Calif., ADams 3-7146
CANADIAN DIV.: HIGGINSON EQUIP. SALES LTD. 1131 Pettit Road, Burlington, Ontario

▲ For more details circle NED-839 F8 on enclosed inquiry slip ▲

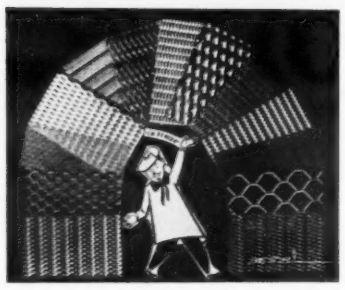
New Processes and Materials

PRESSURE-SENSITIVE TEFLON attaches to variety of materials

This pressure-sensitive Teflon tape can be applied to metal, wood, rubber, glass, plastics, and other rigid materials by contact pressure. A long-life adhesive, protected by a strippable paper backing, provides a high bond strength. Low friction and nonsticking characteristics of Teflon adapt it for facing chutes, slides, rolls, measuring and feeding devices, and other equipment. The pressure-sensitive tape is produced in ½ to 12-in. widths, 0.005 in. thick, and is packaged on 100-ft spools. Made by **Flexrock Co.**, Packing Div., 3603 Filbert St., Philadelphia 1, Pa.

▲ For more details circle NED-840 F8 on enclosed inquiry slip ▲

EXPANDED METAL offered in variety of patterns



Numbering in the hundreds, the patterns available in expanded metal vary in appearance with openings from 1/16 in. to as large as 1½ in. Thicknesses vary from 0.015 in. to 12 gage. Some patterns include two or more characters or designs within a single sheet. Volume users can be offered an exclusive pattern for application to a particular product. Light gage meshes can be made in coil form, permitting material to be processed through slitter lines and automatic shears. Made by **Designers Metal Corp.**, 497 E. 159th St., Harvey, Ill.

▲ For more details circle NED-841 F8 on enclosed inquiry slip ▲

WEED KILLER controls deep-rooted perennials

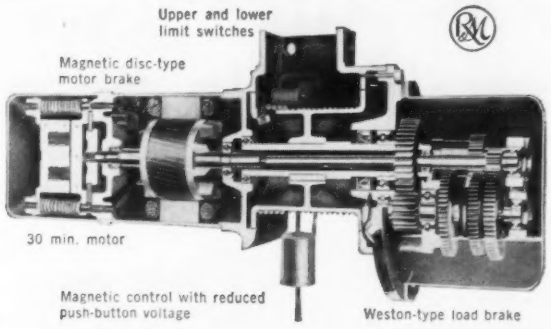
Bindweed, Canada thistle, trumpet vine, and many other tough, broad-leaved, deep-rooted perennials and woody vines growing on industrial properties can be eliminated for one year or longer with Tryben 200 weed killer. It is effective through both contact and residual action. Weed killer is nonselective and is formulated as a liquid to be diluted with water for spray application. Dosages average 5 to 10 gallons per acre—higher dosages prevent establishment of new seedlings. Two gallons of Tryben 200 in 100 gal of water are effective against certain species of woody brush, conifers, wild roses, sumac, persimmon, sassafras, and hackberry. Formulated by **E. I. du Pont de Nemours & Co.**, Dept. NED, Wilmington 98, Del.

▲ For more details circle NED-842 F8 on enclosed inquiry slip ▲

ANTICORROSIVE COATING cold-applied to steel surfaces

An irreversible, uniform emulsion of coal-tar pitch stabilized with mineral colloids, Komul anticorrosive coating is cold-applied to steel surfaces without heating. In cured form, it forms a smooth, tough, continuous film that does not flow at high temperatures or become brittle from cold. Coating will not burn, although it chars at 800° F. Application can be to steel beams, girders, or tanks. Additional uses are as under-floor covering, in drain wells, and as a sealer over asphalt driveways. Film resists most petroleum products, inorganic salts, acids, sunlight, and water. Application is by brush or spray, and drying time is 1 to 2 hours. Made by **Selby, Battersby & Co.**, Dept. NED, 5220 Whitby Ave., Philadelphia 43, Pa.

▲ For more details circle NED-843 F8 on enclosed inquiry slip ▲



new low-cost hoist

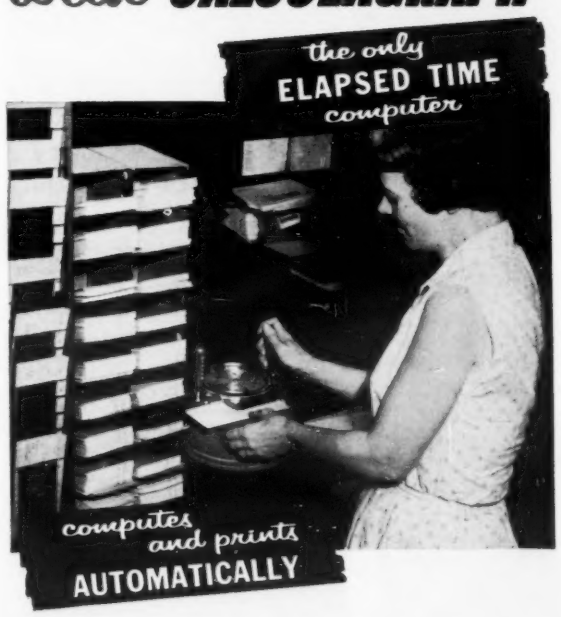
[redacted]

CAPACITIES: ¼, ½, 1, and 2 tons—New Type J wire rope hoists, in three frame sizes, give you important industrial quality features at no extra cost. R&M high torque hoist motor has highest time rating of any in the low price hoist field—30 min., 55° C. Magnetic disc type motor brake, Weston-type load brake, jam-proof upper and lower limit switches—all contribute to long, virtually trouble-free life. Tough aluminum alloy frame. Full magnetic push-button control with reduced push-button voltage. Plain, geared, or motorized trolleys available. Request Bulletin 905 today. **Robbins & Myers, Inc., Hoist & Crane Division, Springfield, Ohio.**

take it up with
ROBBINS & MYERS
hoists cranes

▲ For more details circle NED-844 F8 on enclosed inquiry slip ▲

FREE clerks for other duties . . . .
— obtain EXACT COST DATA
automatically
with CALCULAGRAPH



Now, automatically, you can have production records and exact cost data more accurately, more efficiently and more quickly when you include Calculagraphs in your time and cost system. You eliminate costly human errors because Calculagraph—and only Calculagraph—*computes* and *prints* ELAPSED TIME *free*.

Look at these BIG CALCULAGRAPH advantages—

- Will fit into your PRESENT SYSTEM *without* costly changes
- Uses *any type* of job card
- One machine can serve an *entire* department
- Is a self-contained unit—needs NO MASTER CLOCK
- Computes ELAPSED TIME to the *minute* or *tenth of an hour*

You'll find that Calculagraph can *save clerical time, reduce costs* and give you necessary cost information *faster and* with *100% accuracy*. Investigate Calculagraph NOW.

Write for complete information today

Agents in Principal Cities

CALCULAGRAPH Company
307 Sussex Street • Harrison, New Jersey

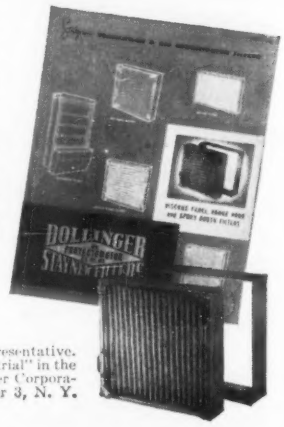
MANUFACTURERS OF ELAPSED TIME COMPUTERS FOR OVER 65 YEARS

▲ For more details circle NED-845 F8 on enclosed inquiry slip ▲

FREE LATEST STAYNEW FILTER INFORMATION

Ventilation Filter Bulletin 700

Gives complete data on all Dollinger Panel Filters for removal of dust and other foreign matter by the impingement method. Illustrates cell construction, gives performance characteristics in chart form, and describes simple washing and charging technique. Get your copy today.



Call your local Dollinger Representative. He's listed under "Filters, Industrial" in the Yellow Pages. Or, write Dollinger Corporation, 49 Centre Park, Rochester 3, N. Y.

PROTECTOMOTOR STAYNEW FILTERS — DOLLINGER

SPECIALIZING IN DRY TYPE FILTERS FOR OVER 35 YEARS

▲ For more details circle NED-846 F8 on enclosed inquiry slip ▲

RIVETT SQUAREMASTER "100" CYLINDERS

Unfailing POWER for MILLIONS of cycles!

SQUAREMASTER 100's are the world's finest cylinders—perform with 100% efficiency! 200 P.S.I. air to 500 P.S.I. oil. 7 standard mountings, 10 bores, internal and external threading.

RIVETT, INCORPORATED
Dept. NED-6, Brighton 35, Boston, Mass.

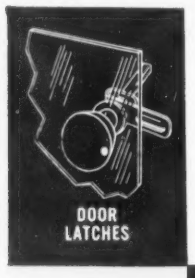
*Initial High Coefficient of Static Friction

1. Piston rod. Hard chrome-plated. **2.** Piston rod bearing. Replaceable. **3.** Piston packing adjusts automatically. **4.** Correctly stressed tie rods. **5.** Cushion bushings. Bronze, floating. **6.** Ports rotated 90°.

SEND FOR CATALOG. Shows proof of SQUAREMASTER efficiency.

RIVETT FURNISHES A COMPLETE POWER PACKAGE

▲ For more details circle NED-847 F8 on enclosed inquiry slip ▲



LOW INSTALLED COST WITH SOUTHCO DOOR AND PANEL LATCHES

Quick, simple installation. Built to last. When economy is a must, yet efficient, trouble-free operation PLUS sales appeal are important too, look at SOUTHCO's complete line. SOUTHCO Latches hold doors and panels pressure-tight to resist vibration, keep out dust. There's a SOUTHCO Latch for every job.

- *Attractive appearance*
- *Installed in seconds*
- *No striker plate*

SEND FOR *FREE* FASTENER HANDBOOK

Write to: Southco Division, South Chester Corp., 243 Industrial Highway, Lester, Pa.

SOUTHCO FASTENERS LION

© 1957

▲ For more details circle NED-848 F8 on enclosed inquiry slip ▲

New Literature & Catalogs

Rhodium Electroplating

Sel-Rex Corp.—Where, when and how to use Rhodium Electroplate for electrical, electronic, and other industrial applications is summarized in 24-page booklet. It features graphs and charts showing rates of deposition under various operating conditions. Rhodium electroplating produces crack-free, compressively stressed deposits.

▲ For more details circle NED-849 F8 on enclosed inquiry slip ▲

Industrial TV Equipment

General Precision Laboratory Inc.—"How Many Jobs" is title of 8-page brochure which illustrates the many monitoring and control jobs that industrial television equipment can help do better. Different types of cameras, control units, monitors, accessories, and projection systems are shown, as well as installations with unusual engineering requirements.

▲ For more details circle NED-850 F8 on enclosed inquiry slip ▲

High Manganese Steel Products

Manganese Steel Forge Co.—Numerous applications of "Roll-Man Rolled and Forged High-Manganese Steel Products for the Aggregates Industries" are explained in 8-page bulletin. These uses include liners, wear plates, bolts, pins, shafts, bushings, digger teeth points, bucket lips, and dragline bucket cutting teeth.

▲ For more details circle NED-851 F8 on enclosed inquiry slip ▲

Woven Wire Screens

Audubon Wire Cloth Corp. — Comprehensive 16-page catalog describing Vibraloy and Vibraloy T woven wire screens illustrates wire drawing, tempering, and testing facilities as well as company's line of crimping dies, tools, and specially-built production equipment. Section devoted to screen definitions, wire sizes and weights explains how to figure wire size, mesh, and space.

▲ For more details circle NED-852 F8 on enclosed inquiry slip ▲

Track Inspection Kit

L. B. Foster Co. — Track Inspection Kit provides checklist for determining general condition of a plant's railroad trackage and the specific areas needing correction or replacement. It contains special forms which serve as both records of the inspection and as requisition memos for purchasing new materials. A 16-page instructional handbook on track maintenance is included.

▲ For more details circle NED-853 F8 on enclosed inquiry slip ▲

Tubular Centrifugal Fans

Dryer Electric Corp. — Tubular compactness and centrifugal performance are combined in tubular centrifugal fans used in air conditioning, ventilation, and industrial processes. 16-page Bulletin TC-1-57 explains how TC fans are true centrifugals in basic design and operation. Graphic curves simplify selection of fans for volumes from 500 to 100,000 cfm and static pressures up to 12 in.

▲ For more details circle NED-854 F8 on enclosed inquiry slip ▲

Specialized Electronic Equipment

Jackson Electronic & Mfg. Co. — Illustrating this firm's capabilities in design and manufacture of special electronic equipment, 20-page brochure shows typical examples of test units and control assemblies engineered for military and industrial applications. Data cover motor-generator sets, ground power systems, flight simulators, and computer equipment developed for research, testing, and production in the aircraft and missile fields.

▲ For more details circle NED-855 F8 on enclosed inquiry slip ▲

Shaft-Mounted Speed Reducers

Peerless Gear & Machine Co.—No torque arm is required when using Peerless center line drive, shaft-mounted speed reducers. They are suited for up to 10-hp drives in models to fit a wide range of shaft sizes. Performance, application, and design information is given in 8-page Bulletin 316.

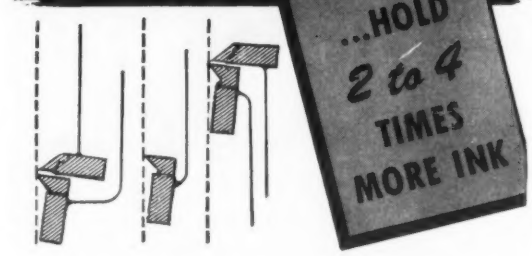
▲ For more details circle NED-856 F8 on enclosed inquiry slip ▲

Rubberized Abrasives

Cratex Mfg. Co.—Deburring, smoothing, and polishing are but a few of the operations that are performed efficiently with Cratex rubberized abrasives. Coarse, medium, fine, and extra-fine fused silicon carbide grain structures can be furnished in wheels, points, blocks, sticks, or cones for hand or machine use. Complete information on these "cushion-action" rubberized abrasives is given in 8-page industrial catalog.

▲ For more details circle NED-857 F8 on enclosed inquiry slip ▲

BETA CHART PENS



Beta Fountain Pens hold two to four times the ink of ordinary chart inking pens. Regardless of the line thickness Beta Pens produce a smooth unbroken and uniform line. Pens shown are approximately actual size and can be arranged to reduce time interval between static and differential lines to only a few minutes. Beta Pens are especially suitable for seven day records. Price $1.20 (lower prices in quantities).

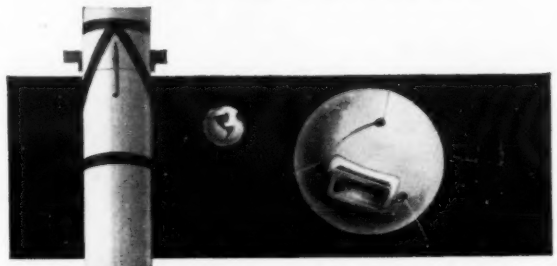
Send for bulletin No. 110-R1

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

Available for Early Delivery

▲ For more details circle NED-858 F8 on enclosed inquiry slip ▲

New Product Announcement



STEMCO TYPE MX* THERMOSTATS

especially designed for missile, avionic and electronic applications

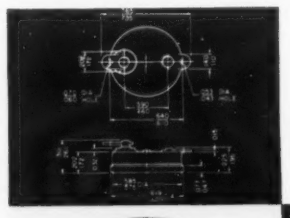
New Stemco Type MX Thermostats are miniature snap-acting units designed to *open* on a temperature rise. Being compact, lightweight units able to withstand high G's under wide ambient temperature ranges, Type MX thermostats are ideal for missile, avionic and other electronic applications where close temperature control is mandatory.

Basic design flexibility of the Stemco Type MX Series means the units can be supplied from regular production runs in a wide variety of models, both semi-enclosed or hermetically sealed. Ceramic or metal bases for semi-enclosed units, round enclosures or CR-7 crystal cans for hermetically sealed units. Several types of terminal arrangements, mounting provisions, brackets, etc., are available.

Stemco Type MX thermostats give you performance . . . small cubage . . . rugged reliability . . . *at a production price.*

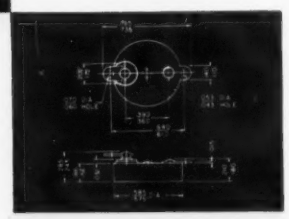
*2° to 6°F differentials available

AA-7283



TYPE MX *Hermetically Sealed* — Electrically independent bimetal disc. Rated at 1 amp at 115 VAC and 28 VDC, based on 250,000 operations.

TYPE MX *Semi-Enclosed*— Metal base shown; also ceramic base types. Bulletin 6100 for data on hermetically sealed and semi-enclosed types.



STEVENS *manufacturing company, inc.*
Lexington and Mansfield, Ohio

STEMCO THERMOSTATS

▲ For more details circle NED-859 F8 on enclosed inquiry slip ▲

BURNITOL DISPOSABLE UTILITY BOXES

SO MANY USES . . . SO ECONOMICAL!

Eliminate the cleaning and maintenance of small containers! Burnitol Utility Boxes are of one piece waxed paper board construction shipped ready for use. So economical they are readily expendable.

There's no limit to the uses of this sturdy container . . . from handling nuts and bolts to fine powders (siftproof). Ideal for small parts assembly or storage, Burnitol will hold wet or dry materials, and will hold water more than 24 hours. Uniform size: 6½" x 6½" x 3". Already in use in the country's largest industrial plants.

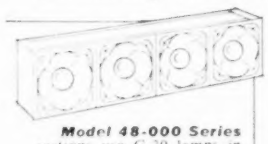
Write today for free samples and prices.

BURNITOL MANUFACTURING CO.
P. O. Box #118, Chicopee 3, Mass.

▲ For more details circle **NED-860 F8** on enclosed inquiry slip ▲

Assemble these **FOSTORIA INFRA-RED SECTIONS**

easily and at low cost for many heating jobs



Model 48-000 Series sections use G-30 lamps in 125, 250, 375 and 500 watt sizes. Low first cost. Efficient, economical operation. Wide range of heat output.

Model 51-000 Series sections use quartz lamps, quartz tubes, or metal rods. Ideally suited for a wide range of heating jobs. Choice of aluminized or gold reflectors.

Complete set of parts available . . . full instructions provided

Many uses include spot heating jobs, laboratory applications, production heating, baking, drying, degreasing, curing, etc. Save time and cut processing costs.

Features. Precision built sections. Top quality materials. Exceptionally high efficiency rating. Sections available in various lengths and widths.

Easy assembly. Any maintenance or electrical worker can assemble with instructions provided. Portable or permanent type ovens can be assembled from Fostoria parts.

Available through electrical wholesalers everywhere. Ask for free literature and specifications. Or write direct to factory. Dept. N658.

THE fostoria PRESSED STEEL CORPORATION
Fostoria, Ohio 5801

LARGEST MANUFACTURER OF COMPLETELY ENGINEERED INFRA-RED OVENS AND COMPONENTS IN U.S.A.

▲ For more details circle **NED-861 F8** on enclosed inquiry slip ▲

No time for this

SAVE LABOR *Handle Barrels THIS Way*

OLD WAY

An ordinary truck requires two or three men to pick up and move barrels and drums up to 800 pounds.

SABIN

ONE-MAN BARREL AND DRUM TRUCK

SIMPLE TO OPERATE. Just run truck up to container, hook on at top and pull back on handle to pick up load. **Exclusive Third Wheel Feature** ensures better balance and added safety in moving loads.

WRITE FOR BULLETIN NO. 48-A

THE SABIN MACHINE CO.
6536 Carnegie Avenue
CLEVELAND 8, OHIO

MODERN WAY

With a Sabin Type "L-3" Truck, ONE MAN does the same job with ease. You save time and cost of helpers.

▲ For more details circle **NED-862 F8** on enclosed inquiry slip ▲

New Processes & Materials

RUBBER FLOOR RUNNER
has ribbed, nonskid surface

Color Chip Rubberlike, a thermoplastic protective floor runner flecked with color by means of plastic chips added during manufacturing, supplements standard

all-black Rubberlike runners. Available fleck colors are red and white, and green and white, both in a black background. Runners protect floor from heavy traffic in industrial plants and commercial and public buildings. Made with an asphalt base and a ribbed, nonskid surface, Rubberlike is also useful in channeling foot traffic, easing foot fatigue, and preventing accidents. Made by **Bird & Son, Inc.**, Dept. CD-NED, East Walpole, Mass.

▲ For more details circle **NED-863 F8** on enclosed inquiry slip ▲

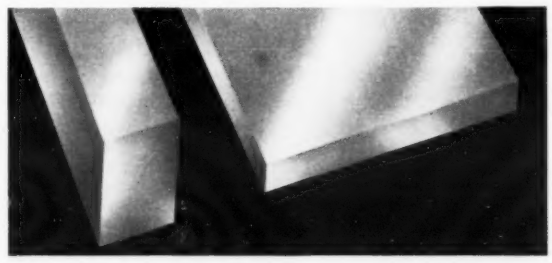
SOLID FILM LUBRICANT
contains molybdenum disulfide

Seizure of sliding parts under extreme pressures and temperatures is eliminated by Surf-Kote M-1248 solid film lubricant containing molybdenum disulfide. A metallic bonding principle makes it suitable for a wide variety of applications. Lubricant will also speed up parts assembly, prevent fretting corrosion, and facilitate the break-in of engine parts and other components. Made by **Hohman Plating & Mfg. Co.**, 814 Vermont Ave., Dayton 4, Ohio.

▲ For more details circle **NED-864 F8** on enclosed inquiry slip ▲

WEAR PLATES
steel has bronze bearing surface

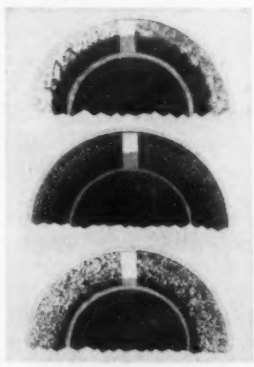
Low cost, machinability, and solid backing of steel are combined with long-wearing, nonseizing, free-running properties of a copper-tin bronze alloy bearing



surface in this line of wear plates. They are usable wherever there is sliding contact between flat metal parts. The electroplated bronze becomes an integral part of the steel, precluding displacement under heavy load. Wear plates are available in popular thicknesses and widths, flat and parallel, and can be machined to the application. Made by **Lamina Dies & Tools, Inc.**, Dept. W-T, Royal Oak, Mich.

▲ For more details circle **NED-865 F8** on enclosed inquiry slip ▲

CORK GASKETING MATERIAL
prevents leakage in fluid service



Uniphase cork gasketing material, designed to eliminate seepage and leakage in liquids and gas applications, is made with a continuous - phase elastomeric binder that surrounds and embeds the cork particles. Binder closely approaches the chemical inertness of cork itself. Material is extremely resistant to fungus and ozone. It seals perfectly at flange pressures as low as 100 psi, and flange loads as high as 4000 psi will not crush it or cause it to extrude. Oil penetration tests pictured show Uniphase cork (bottom) blocking fluid almost at inside perimeter of gasket. Ordinary cork composition (top) and cork-rubber gasket (middle) show half-way and one-third penetration. Made by **Armstrong Cork Co.**, 1270 State St., Lancaster, Pa.

▲ For more details circle **NED-866 F8** on enclosed inquiry slip ▲

NEW J-E

Industrial
SOLENOID VALVES

Low in cost
Unusually Dependable
Proven Design Features

The new Jackes-Evans "SERIES J" Solenoid Valves for industrial uses incorporate the accepted fine construction and operating features found in standard J-E valves, and are offered at an exceptionally low price.

Use them for the control of air, water, brines, light oils, low pressure steam, industrial and L.P. gases as well as other non-corrosive fluids. Pilot operation. Maximum pressure differential of 150 psi. Mount in any position. Only two moving parts. Exceptionally durable synthetic diaphragm. Thoroughly proven in millions of test cycles and *on the job* in a wide variety of applications.

You'll be amazed at their low cost, pleased with their long life and trouble free operation. Write for Bulletin J-57.

Controls Division
JACKES EVANS MANUFACTURING COMPANY
4427 Geraldine Ave. • St. Louis 15, Mo.

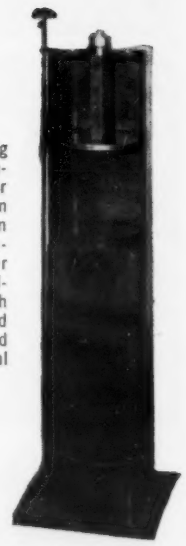
▲ For more details circle **NED-867 F8** on enclosed inquiry slip ▲

Pyles

PORTABLE MIXING AND FILLING UNITS

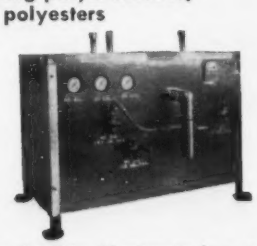
Pyles-SEMCO
SEALANT GUN
CAPACITY
2½ oz., 6 oz., 12 oz.

• Designed for blending catalyst and additive materials in an open container . . . Up to a quart or gallon of material may be mixed in a few minutes and delivered, while still under pressure, into a polyethylene cartridge for use with the sealant gun. Designed for low production and portability for the industrial and building trades.



AVAILABLE IN ONE QUART AND ONE GALLON SIZES

Automatic Continuous
BLENDOMETER
metering and mixing polyurethenes; epoxies, polyesters



Multi-Purpose Pumps
•
Metering and Measuring Devices
•
Hydraulic Hose Machines & Couplings
•
Conveyor Lubricators
•
"Tip-Seal" Flow Guns & Nozzles

• The Pyles Blendometer is a production unit suitable for continuous measuring and mixing of two and three part chemical systems. Chemicals, which will gravity flow, can be metered to a mixing head through variable control metering units which can be adjusted with very high accuracy. Unit measures 36" x 21" x 29½" high. Weight 500 lbs.

PYLES INDUSTRIES, INC.
8926 SECOND AVENUE • DETROIT 2, MICHIGAN

▲ For more details circle **NED-868 F8** on enclosed inquiry slip ▲

Make your next connection with

asg UNIVERSAL JOINTS

They are made to provide smooth, more efficient transmission of power and are available from stock in 13 sizes with bored or solid hubs ranging from .375" to 4.000". Special bores, bores with keyways or setscrews are available upon special order.

Joints with hub diameters of .750" and larger have a self-closing snap ball oiler while the small pin is held in place with a self-locking snap ring.

Send today for Bulletin No. 527 describing the full line of ASG Universal Joints available from your nearest distributor.

AMERICAN STOCK GEAR DIVISION
PERFECTION GEAR COMPANY, HARVEY, ILL., U.S.A.

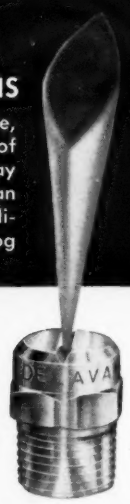
▲ For more details circle NED-871 F8 on enclosed inquiry slip ▲

Spray Nozzles

A Complete Selection for INDUSTRIAL APPLICATIONS

Flat spray, cone spray, hollow cone, solid cone — a complete range of types in a wide variety of spray angles. In most cases, Delavan can furnish the best nozzle for your application from stock. Write for Catalog 33 today.

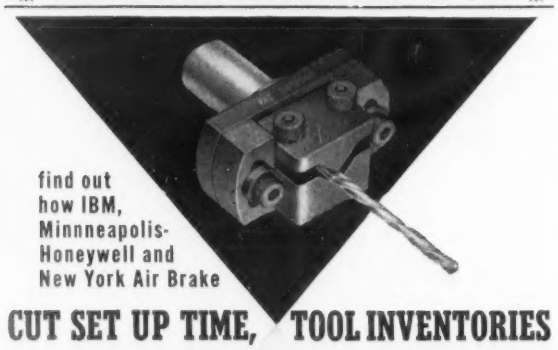
Catalog 33—Twenty-eight pages of information on Industrial Spray Nozzles



Type WF Flat spray nozzle

DELAVAN Manufacturing Company
WEST DES MOINES, IOWA

▲ For more details circle NED-872 F8 on enclosed inquiry slip ▲



find out how IBM, Minneapolis-Honeywell and New York Air Brake

CUT SET UP TIME, TOOL INVENTORIES with Brookfield Tool Holders*

Simple Things Pay Off! The simpler they are, the better they work. What could be simpler than a precision ground V-jaw vise for a tool holder? If you had thought of it first (and we don't know why you didn't) you'd be selling them by the thousands, just as Brookfield now is.

It's so simple, it's perfect. Just slip the tool into the V-jaw, tighten, and you're off and running with perfect alignment. No time-consuming setup adjustments. No costly bushings or collets to stock or make. Brookfields hold drills, reamers or cutters of any size within the range of any model. A new, colorful, information-packed brochure tells the whole story. It's yours free for the asking!

Write, wire, phone *Patent No. 2472040

BROOKFIELD, INCORPORATED
STOUGHTON 114, MASSACHUSETTS

West Coast Stocking Distributors: Jones Industrial Sales, 910 Geneva St., Glendale 7, Cal., Phone Citrus 1-3306

▲ For more details circle NED-873 F8 on enclosed inquiry slip ▲

New Literature & Catalogs

Controlling Labor Costs

Manpower, Inc.—Entitled "The Controlled Overhead Plan" 8-page booklet outlines savings in fringe benefits, record keeping, working force turnover, and compensation costs offered by this company's temporary help services. According to this plan, business firms keep their staff, space, and equipment at the level needed for normal routine operation. When work rises above that level, temporary help, offices, and equipment are used to handle overload.

▲ For more details circle NED-874 F8 on enclosed inquiry slip ▲

Wheel Tires & Hand Grips

Ohio Rubber Co.—20-page illustrated Bulletin 714 describes complete line of semipneumatic and solid molded rubber tires for use on wheeled vehicles and mobile equipment. Also detailed are rubber and vinyl plastic grips for hand and power appliances and equipment. Company's custom molding and extrusion services are discussed, as are Orco compounding, production, and quality control procedures.

▲ For more details circle NED-875 F8 on enclosed inquiry slip ▲

Pump Design Considerations

Food Machinery & Chemical Corp., Peerless Pump Div.—"Mechanical Considerations in Pump Design" is title of 8-page brochure which discusses cause, effect, and cure of damaging radial thrust forces on process pump components. Formulas and diagrams explain design and production of basic types as well as determining shaft length and diameter, deflection limits, types of bearings, and sealing methods.

▲ For more details circle NED-876 F8 on enclosed inquiry slip ▲

Drafting Room Equipment

Stacor Equipment Co.—Dimensional data and other specifications are tabulated on each piece of drafting room, art, and school equipment covered by 24-page General Catalog GC-57. It lists flat files, mobile chart storage units, wood and steel drafting units, drawing and tracing tables, and accessories.

▲ For more details circle NED-877 F8 on enclosed inquiry slip ▲

Glassed-Steel Reactors

Pfaudler Co.—Installation, operation, and maintenance procedures for glassed-steel reactors are detailed in 12-page Bulletin 955. Consideration is also given to proper gasketing, jacket-cleaning techniques, repair procedures for severe and mild chemical service, and thermal shock. Proper procedures for inspecting glass, protecting vessel exterior, and storing are also outlined.

▲ For more details circle NED-878 F8 on enclosed inquiry slip ▲

Aircraft Steels & Specifications

Joseph T. Ryerson & Son, Inc.—Revised 1958 issue of "Ryerson Aircraft Steels" contains condensed information on Military and Government aeronautical specifications, list of alloy and stainless steels for immediate shipment, and data on a plan of quality control. The 72-page booklet is intended to be a reliable guide for specifying and purchasing aircraft quality steels.

▲ For more details circle NED-879 F8 on enclosed inquiry slip ▲

Air Conditioner Applications

Niagara Blower Co.—Applications of the Niagara Type A air conditioner are pictured in 8-page Bulletin 122. Installation assures precise control of air temperature and moisture to aid in uniformity of product manufacture in any climate. Normal temperature range is 35 to 140° F. Sizes range from 1000 to 24,000 cfm air capacity.

▲ For more details circle NED-880 F8 on enclosed inquiry slip ▲

Saw Blade & Knife Sharpeners

Black Diamond Saw & Machine Works, Inc.—Brief descriptions of a band saw filer, circular saw and knife grinder, circular saw filer, and band saw guides are presented in 4-page folder. Advantages of each unit are pointed up, and specifications are given.

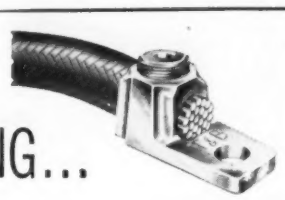
▲ For more details circle NED-881 F8 on enclosed inquiry slip ▲

Materials Handling Conveyors & Systems

May-Fran Engineering, Inc.—Catalog MF-100 on company's line of conveyors is compiled to aid in selecting hinged steel belt conveyors for handling scrap, chips, turnings, stampings, forgings, heavy parts, and assemblies. Emphasis is given to standardized component parts that enable user to create system of his own design. These sections can be assembled, lengthened, shortened, or dismantled to meet changing requirements.

▲ For more details circle NED-882 F8 on enclosed inquiry slip ▲

INTRODUCING...



the T&B ENGINEERED CONE-SCREW LUG! for copper cable

A PERFECT WAY TO END THE JOB

This new series of connectors brings you greater ease and economy in terminating copper cable. The T&B *cone-screw lug* is a compact, one-piece connector, with extra wide cable range and exclusive non-tarnish, corrosion-proof finish. It's modern in appearance; modern in performance. Its positive wire-stop and tapered cone-screw make installation fast . . . and far more secure.

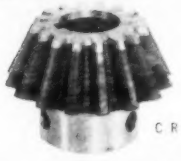
T&B *cone-screw lugs* are available to fit all popular conductor sizes, #14AWG to 500MCM. See your T&B distributor. He has the complete line in stock.

THE THOMAS & BETTS CO.
24 Butler Street, Elizabeth 1, N. J.
THOMAS & BETTS, LTD. Montreal, P. Q., Canada

EXTRA! Every standard package of T&B cone-screw lugs contains a free installing wrench . . . with plastic-cushioned handle.

▲ For more details circle NED-883 F8 on enclosed inquiry slip ▲

C/R Rawhide gears

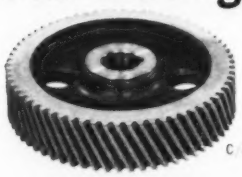


C/R Rawhide Bevel Gear

soak up shock loads,

C/R Nylon Gear

save metal mating gears!



C/R Bakelite Timing Gear

C/R Rawhide and other C/R non-metallic gears transmit power quietly and efficiently, with less vibration than other gears. These pinions take all the wear, soak up shock loads up to three times their rated capacity. You'll find they protect expensive metal mating gears, prolong the life of the machine. Where high temperature and humidity are factors, C/R gears cut from Nylon, Bakelite, Textolite, Formica, Micarta or Fabroil are generally recommended. C/R also cuts special purpose gears and pinions of material such as Synthane, Spauldite, Celeron and Insurok — as well as all metallic gear materials. C/R gears range in size from 1" O.D., ¾" face, up to 30" O.D., 12" face. Diametral pitches from 1¼ to 64; horsepower ratings up to 250 hp.

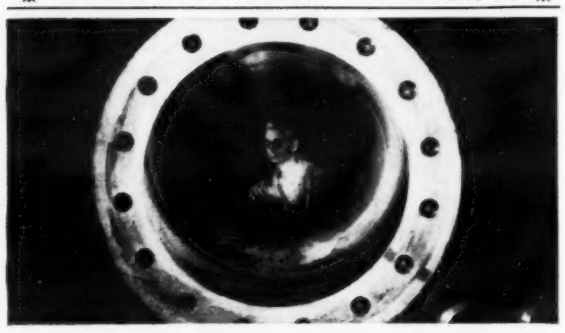
Our experience in cutting gears for all types of applications is unsurpassed in the industry. May we help you? Write for our illustrated C/R Gear Booklet.

GEAR C/R DIVISION
CHICAGO RAWHIDE

CHICAGO RAWHIDE MANUFACTURING COMPANY
1271 Elston Avenue • Chicago 22, Illinois
Offices in 55 principal cities. See your telephone book.
In Canada: Chicago Rawhide Mfg. Co. of Canada, Ltd., Brantford, Ontario
Export Sales: Geon International Corp., Great Neck, New York
C/R PRODUCTS: C/R Shaft & End Face Seals • Sirvene (synthetic rubber) molded pliable parts • Sirvis-Conpor mechanical leather cups, packings, boots.

▲ For more details circle NED-884 F8 on enclosed inquiry slip ▲

▲ For more details circle NED-885 F8 on enclosed inquiry slip ▲



You get greater strength...with

SHENANGO CENTRIFUGAL CASTINGS

Downtime, rejects, heavy maintenance costs and too-frequent replacements can be cut down *appreciably* by the use of Shenango extra-strong centrifugal castings. They provide a finer, *pressure-dense* grain . . . with all the weakening defects eliminated, such as blow-holes and sand inclusions.

Though built to stand the most rugged service, each Shenango casting is precisely-dimensioned to your exacting requirements. Whether you need rolls, bearings, bushings, mandrels, sleeves, liners, or any other essentially symmetrical part . . . *specify Shenango* for greater strength, greater wear-resistance, greater lasting power and greater savings, year after year.

For informative bulletins, write to: *Centrifugally Cast Products Division*, The Shenango Furnace Company, Dover, Ohio.

SHENANGO CENTRIFUGAL CASTINGS

COPPER, TIN, LEAD, ZINC BRONZES • ALUMINUM AND MANGANESE BRONZES • MONEL METAL • NI-RESIST • MEEHANITE METAL • ALLOY IRONS

▲ For more details circle NED-886 F8 on enclosed inquiry slip ▲

▲ For more details circle NED-887 F8 on enclosed inquiry slip ▲

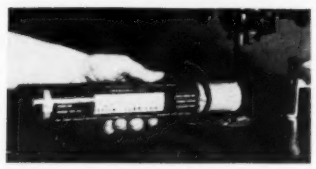
New Processes & Materials

BOLT-ANCHORING CEMENT
withstands severe vibration

Addition of a chemical element to Evr-Tite fast-setting, pourable cement improves its setting, hardness, abrasion resistance, and shock-absorbing characteristics and enables it to withstand severe vibration of heavy machinery. Applied around an anchor bolt, the cement attaches itself to the bolt surface, and produces a void-free, monolithic anchor. Material is supplied as a light gray powder to be mixed with water in mortar box or machine. Setting time is 10 minutes and equipment can be operated within ½ hour. Quantities of 60, 125, 225, and 300 lb are offered. Made by **Monroe Co.**, Dept. M-1, 10703 Quebec Ave., Cleveland 6, Ohio.

▲ For more details circle NED-888 F8 on enclosed inquiry slip ▲

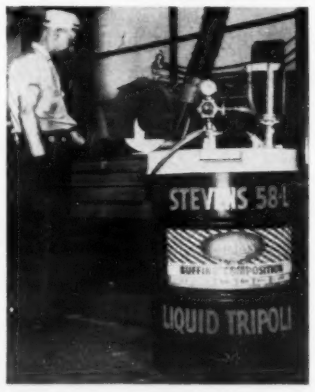
STICK LUBRICANT
for sawing, drilling, and other uses



Applied directly to the cutting edge of a tool, Cut-Ease stainless stick lubricant protects against overheating, scoring, binding, and squealing. It increases the life of cutting tools and makes possible smooth, cool cutting, drilling, sawing, tapping, and reaming with power or hand tools. Upon application it changes from a solid to a thin, adhesive coating with good lubricating and film-strength properties. It can be used with all nonferrous metals and wood, plastic, Formica, Lucite, and Bakelite. Each stick comes in a cardboard push-bottom 2-in. diameter tube 10 in. long. Made by **American Grease Stick Co.**, Dept. NED, Muskegon, Mich.

▲ For more details circle NED-889 F8 on enclosed inquiry slip ▲

BUFFING COMPOUND
developed for nonferrous metals



All nonferrous metals, including diecastings, copper plate, brass, and aluminum, can be buffed with Stevens 58-L Liquid Tripoli, a liquid composition. It has good cutting and cleaning characteristics, and is suited to automatic buffing operations. Product is packaged in 1, 5, 10, and 50-gal drums. Made by **Frederick B. Stevens, Inc.**, 1802 18th St., Detroit 16, Mich.

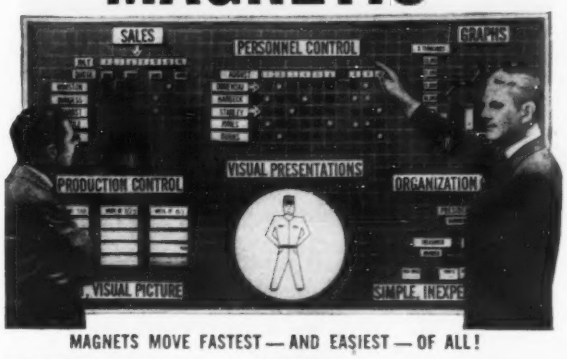
▲ For more details circle NED-890 F8 on enclosed inquiry slip ▲

FLOOR COATING
resists acid, alkalies, solvents

Corrosion resistant Penntrowel floor coating will support heavy traffic and withstand temperatures of 230° F. A thermosetting product, it resists strong acids including hydrofluoric, alkalies, and solvents. Three grades are packaged in sizes for easy mixing of correct proportions of resin, filler, and hardener. Coating is troweled on horizontal or vertical concrete, brick, or cement block surfaces in thicknesses from 1/16 to 3/16 in., depending on conditions. Made by **Pennsalt Chemicals Corp.**, Corrosion Engineering Products Dept., 3 Penn Center, Philadelphia 2, Pa.

▲ For more details circle NED-891 F8 on enclosed inquiry slip ▲

VISUAL MAGNETIC CONTROL



MAGNETS MOVE FASTEST — AND EASIEST — OF ALL!

SIMPLEST VISUAL SYSTEM FOR
- Production
- Personnel
- Sales
- Maintenance
- Scheduling
- Machine Loading
- Charts—Graphs
- Visual Presentations

COLORFUL MAGNETIC ELEMENTS
- show facts instantly
- organize for action
- eliminate mistakes
- get the job done

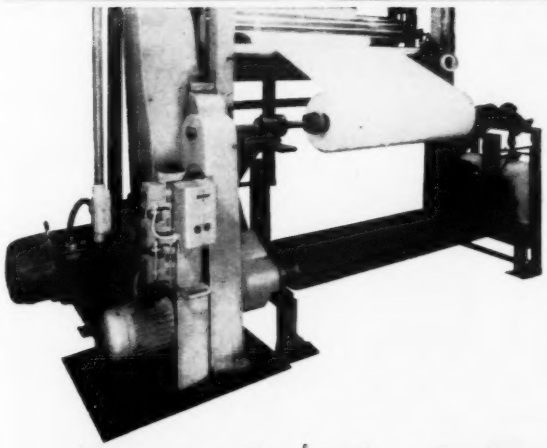
PRICED FROM $38 INCLUDING MAGNETIC ELEMENTS

PRICE LIST & BROCHURE NE6 FREE ON REQUEST

REPRESENTATION DESIRED IN SOME AREAS

Methods Research Corp.
442 Mosel Avenue, Staten Island 4, New York

▲ For more details circle NED-892 F8 on enclosed inquiry slip ▲



"Best for the job, without a doubt"

That's Milam Electric's Opinion of Its Hobbs-Alquist Winding Unit

Milam Electric Manufacturing Co. of Providence, R. I. is one of only 8 companies in the United States which supply the electrical industry with laminated insulation for motors, transformers and generators. Its laminations include films, foils and papers ranging from thin plastic film to heavy paper board. The pressure sensitive coatings of many of the laminations require that constant winding tension be maintained at various degrees of hardness in the master web.

Milam reports that its Hobbs-Alquist winder is "best for the job, without a doubt". Controlled tension on this machine can be maintained in a roll build-up as high as 10 to 1. Torque is sensed automatically as the rewound roll builds up and the speed of the motor is automatically decreased in direct proportion. A uniformly high quality of rewound material results.

Other advantages of the Hobbs-Alquist winder are savings in labor, floor space, maintenance and initial investment and greater cleanliness. This machine uses a 3 phase squirrel cage A.C. motor, flange mounted to a gear reducer. It can be connected *directly* to the rewind shaft; is entirely independent of the main machine drive. Just plug it into your present 3 phase power outlet — no transformers or converters. Then set a knob for the desired tension and walk away.

Get ALL the facts about Hobbs-Alquist winders. Use coupon to send for full information. No obligations, of course.

HOBBS MANUFACTURING CO.
EST. 1888
41F Salisbury St., Worcester 5, Mass.

Send full information on Hobbs-Alquist Winder

Name ..... Title .....
Company .....
Street & No. .....
City ..... State .....
85-8

▲ For more details circle NED-893 F8 on enclosed inquiry slip ▲

BOXES AND BASKETS

These economical steel containers are designed to carry parts on pallets, belts or overhead conveyors through all your production and assembly operations. They eliminate time-consuming transferals, even for degreasing. Stacked alongside of workers or hung in hopper racks, they provide ample supplies of parts in easy reach. Empty, they nest neatly out of the way. Nestier Boxes and Baskets are available in five convenient sizes, 12" to 36" in length. Write for information today. Dept. D-6.

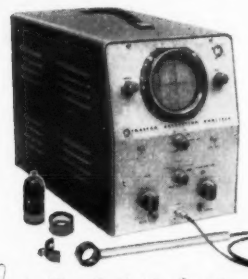
NESTIER FIRST IN SMALL PARTS HANDLING

NESTIER CORPORATION Subsidiary of THE METAL SPECIALTY CO.
4519 Este Ave., Cincinnati 32, Ohio

For more details circle NED-894 F8 on enclosed inquiry slip

for FOOL-PROOF TROUBLE-SHOOTING of Electronic Equipment

NEW WAVE-FORM ANALYZER . . .



- NO PHYSICAL CONNECTION
- TUNED CIRCUITS
- SUPER SENSITIVE
- CONTINUOUS SWEEP
- PROVISION FOR EXTERNAL SYNC.
- SIMPLE CONTROLS
- TOP-SIDE CHECKING

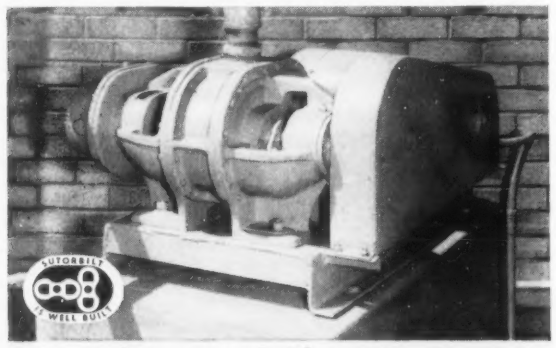
KINGSTON ABSORPTION ANALYZER

A simple to operate, highly sensitive trouble-shooter and tester for use on any equipment having periodic or recurrent waveforms. Unique electrostatic probe allows top-side checking without any physical connection. Rotary tuner for frequencies from 3 to 240mc.

Write today for Bulletin 103-A.

KINGSTON ELECTRONIC CORPORATION
MEDFIELD, MASSACHUSETTS, U. S. A.

For more details circle NED-895 F8 on enclosed inquiry slip



Consulting and Plant Engineers look to SUTORBILT

...for solutions to air and gas handling problems

A 5HXB vacuum pump at the Sunnyvale, California, Sewage Treatment Plant is typical of many in use today. It is used to handle sewer gas from the gasometer at the Waukesha engines.

Sutorbilt is ready to put more than 26 years of experience in manufacturing rotary positive blowers, gas pumps, and vacuum pumps to work for you. Standard units are available in capacities up to 30,000 CFM and pressures or vacuums up to 12 psig. (S-7 4286)

Write for the name of the representative nearest you, or check the yellow pages of your local telephone directory.

SUTORBILT CORPORATION
SUBSIDIARY OF FULLER COMPANY • CATASAUQUA, PA.
P. O. Box 269 • 2966 E. Victoria St. • Compton, Calif.

For more details circle NED-896 F8 on enclosed inquiry slip

New Processes & Materials

Boiler Water Skim-Off

Boiler Specialties Corp.—Bulletin 600 contains complete data on the use and operation of the Surfblow, a unit which installs in boiler drums and automatically and continuously skims off boiler water impurities from the critical steam release zone. It assures pure steam, minimizes water treatment costs, and contributes to low cost boiler operation.

For more details circle NED-897 F8 on enclosed inquiry slip

Pressure Gages

Kunkle Valve Co.—48-page Catalog G-58 describes pressure gages with ranges from 15 psi or 30 in. of vacuum to over 20,000 psi. Engineering data and selection tables aid in application of gages in processing plant and power instrumentation. Gages are available for air, gases, vapors, and liquids with Bourdon tubes of bronze, drawn or bored stainless steel, or other alloys, and with movements and cases to meet every service condition.

For more details circle NED-898 F8 on enclosed inquiry slip

Machine Tool Centers & Grinding Dogs

Ready Tool Co.—The complete line of Red-E centers and grinder dogs for use in lathes, grinders, and other machine tools is detailed in 20-page illustrated Catalog CD-58. Among special centers described are built-in spindle, self-floating, collar-support, collet, eccentric, and chuck types. Data aid in determining the correct tapers and gage line clearances.

For more details circle NED-899 F8 on enclosed inquiry slip

Painting Electrostatically

H. G. Fischer & Co.—Advantages of paint savings, excellence of finish, and optimum production obtainable with electrostatic spray painting are pointed out in 74-page "General Engineering Manual." This guide to planning and installation of a painting system also describes an engineering service and laboratory testing service for those involved in spray finishing problems. Various components as well as complete electrostatic painting systems are covered.

For more details circle NED-900 F8 on enclosed inquiry slip

Continuous Cleaning of Coolants

Infilco Inc. — Seven illustrated bulletins and data sheets present full information of Infilco equipment for the continuous cleaning of coolants and cutting oils. Described are magnetic automatic separators, separator conveyors, precleaning filters, and related equipment.

For more details circle NED-901 F8 on enclosed inquiry slip

Automated Deburring Machines

Acme Mfg. Co.—Applications for wire brushes, abrasive belts, abrasive discs, Tampico brushes, special brushes, polishing wheels, grinding wheels, files, and milling cutters in deburring operations are discussed in 12-page catalog on automated deburring machines. Described are various types of high and medium production machines for finishing or deburring shafts, blades, rotors, cups, sprockets, gears, and many other parts.

For more details circle NED-902 F8 on enclosed inquiry slip

Mills, Counterbores & Reamers

Fastcut Tool Co.—16-page illustrated catalog is cross-indexed for easy reference and tool selection in the area of end mills, keyseat cutters, combined drills and countersinks, center reamers, continuous pilot counterbores, and spiral-fluted chucking reamers. Tools range up to $\frac{3}{4}$ in. in diameter.

For more details circle NED-903 F8 on enclosed inquiry slip

Quick-Disconnect Couplings

Snap-Tite, Inc.—Special 26-page catalog deals with quick-connect, quick-disconnect couplings for guided missile and aircraft use, as well as for other exceptional applications. Some feature remote disconnect by solenoid or lanyard action, with emergency manual operation optional. Constructions are available to handle practically any fluid.

For more details circle NED-904 F8 on enclosed inquiry slip

Hydraulic Fluids Guidance

Sun Oil Co.—"Hydraulic Fundamentals and Industrial Hydraulic Oils" is title of Technical Bulletin B-4. This 44-page manual is a practical introduction to hydraulic systems. It illustrates and details the most important types of valves, pumps, motors, torque converters, and accessories. Also explained are important hydraulic oil characteristics, oil selection data, and trouble-shooting.

For more details circle NED-905 F8 on enclosed inquiry slip

Fibre Glass Aluminum Coating protects roofs, lowers temperatures!

A new aluminum roof coating that adds years to roof life while reducing inside temperatures up to 20° is announced by The Garland Co., Cleveland 5, Ohio.

Known as Supercote Aluminum FG, it contains an extra-bright aluminum pigment reinforced with millions of glass fibres. This combination, besides providing a more durable coating, promotes better leafing of the aluminum and a 10% brighter finish. As a result, Supercote Aluminum FG reflects a greater proportion of the sun's rays and lowers under-roof temperatures up to 20°. Also, unlike other materials, it won't darken or "brown-off" with age.

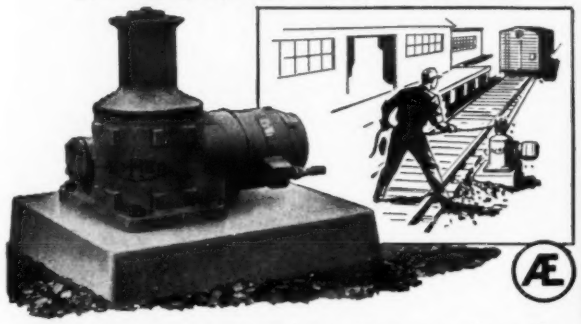
In addition to fibre glass, Supercote Aluminum FG is formulated with special plasticizers and waterproofing oils. These penetrate and resaturate dried out roofing felts, keep coating from becoming brittle and provide a positive bond to old roof surfaces. Addition of long fibre asbestos further increases wear and weather resistance.

Supercote Aluminum FG is recommended for all industrial roofs, schools, hotels, institutions, etc. It is particularly well adapted for use on roofs of air conditioned buildings, where it can effect important savings by cutting electric current requirements.

Available in 5-gallon pails and 55-gallon drums, Supercote Aluminum FG can be easily applied with roofing brush, squeegee or standard spraying equipment. For additional information, request bulletin A-405, **The Garland Co., 3748 E. 91 Street, Cleveland 5, Ohio.** *Advt.*

For more details circle NED-906 F8 on enclosed inquiry slip

NOW! STOP WASTEFUL EXPENSE AT YOUR RAILROAD SIDING



IF YOU actually saw a Lo-Hed Car puller in operation you'd probably order one in a hurry. It is a first rate investment — pays for itself fast. It puts a stop to shifting charges. Cars get loaded and unloaded in record time. Demurrage charges are slashed. Industrial accidents are minimized . . . And a Lo-Hed Car Puller saves money *inside* a plant, too — pulls loads in a straight line, up grades and around corners.

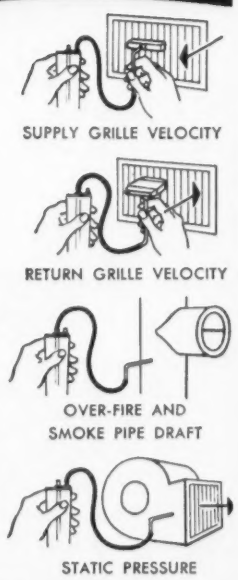
Lo-Hed Car Puller is rugged, electrically-driven, built for trouble-free service. Write for folder telling you how to use a Car Puller in your plant.

AMERICAN ENGINEERING COMPANY
Dept. CP-184, Wheatsheaf Lane & Sepviva St., Philadelphia 37, Pa.
CANADIAN SUBSIDIARIES: Affiliated Engineering Corporations, Ltd., Montreal, P. Q. . . . Bowden Industries Ltd., Toronto, Ont.
AE Products are: Taylor, Perfect Spread and Vibra-Grate Stokers, Hele-Shaw and Hydramite Fluid Power, Lo-Hed Hoists, Lo-Hed Car Pullers, Marine Deck Auxiliaries.

For more details circle NED-907 F8 on enclosed inquiry slip

NEW NO. 460 AIR METER BY Dwyer

NOW AN ALL-PURPOSE LOW-COST INSTRUMENT FOR STATIC PRESSURE AND AIR VELOCITY MEASUREMENTS



High *and* low ranges give direct velocity readings from 260 to 4000 fpm., static pressure readings from .005 to 1.0 inches of water. A complete instrument kit with every accessory needed for adjusting and balancing air conditioning, heating and ventilating equipment. The entire kit will fit in your shirt pocket.

WRITE FOR BULLETIN B-9

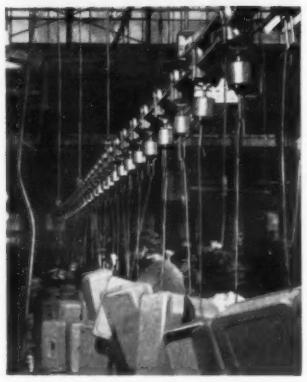
F. W. DWYER MFG. CO.
P. O. BOX 373-Q MICHIGAN CITY, INDIANA

For more details circle NED-908 F8 on enclosed inquiry slip

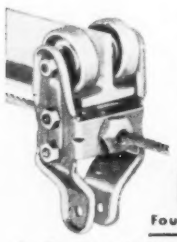
2000 feet of floor space saved with AMERICAN "Cable-Way"®

This 700-foot overhead "Cable-Way" Conveyor also:

1. Increased production 50%.
2. Reduced labor costs.
3. Improved painting and assembly methods.



Parts move on rotating hangers through burn-off oven, hand spray painting, electrostatic spray, and a bake oven.



LOW-COST...EASILY INSTALLED

All-bolted construction. Track can be suspended or floor-mounted. Motor-driven sprockets engage in drive lugs in pitch on continuous cable. Compact dips. Write for Catalog CDA.

CONVEYOR DIVISION
THE AMERICAN MONORAIL CO.
Fourth & Franklin Streets • Tipp City 7, Ohio

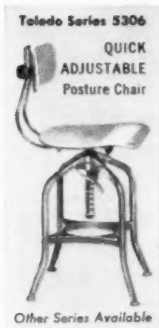
▲ For more details circle NED-909 F8 on enclosed inquiry slip ▲

from SHORT to TALL...

Adjustment is fast, easy, quiet and safe

TOLEDO PRODUCTION SEATING
offers posture adjustment to suit them all!

Toledo Series 5306
QUICK ADJUSTABLE Posture Chair



Other Series Available

Scientifically designed Toledo PRODUCTION SEATING maintains correct body posture, to keep employees alert and efficient—improve productivity and plant safety.

Choose from Toledo's complete line. Get PRODUCTION SEATING exactly suited to each operation in your plant.

FEATURES... HEIGHTS... Quick-adjustable, Adjustable, Fixed, Floor Contacts: 5 kinds to choose. SEATS: Swivel, non-swivel, steel, wood, cushioned. BACKREST: Posture adjustable—spring back or straight.

SEND FOR USEFUL NEW PRODUCTION SEATING analysis chart and literature. No obligation.

TOLEDO
METAL FURNITURE COMPANY
1006 South Hastings Street, Toledo 7, Ohio

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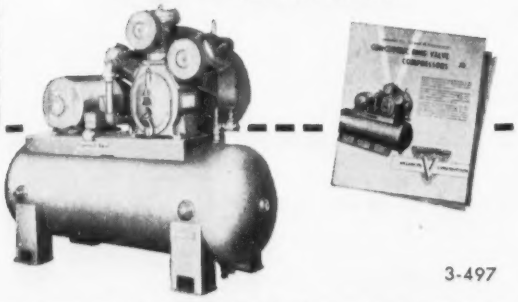
write for new catalogs

New catalogs show the features and performance data of the Ingersoll-Rand Type 30 Compressors and Vacuum Pumps—from ½ to 20 hp—send for your copies today and find out more about

- Balanced V Construction
- I-R Tested Valves
- Foolproof Unloading

Ingersoll-Rand
11 Broadway, New York 4, N.Y.



3-497

▲ For more details circle NED-911 F8 on enclosed inquiry slip ▲

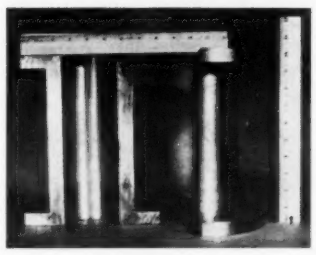
New Processes & Materials

CASTING RESIN is fire-retardant epoxide

Used directly as supplied, Stycast 2980 one-component, fire-retardant epoxide casting resin and impregnant cures at moderate temperatures. Large metal objects, such as transformers, can be impregnated and embedded in the material. It can be used from −70 to 400° F. No cracking is evident on severe temperature cycling. Insulation resistance is 10^{16} ohm-cm at room temperature and remains above 10^{11} ohm-cm at 400° F. Other properties include 15,000 psi flexural strength, less than 0.1 per cent water absorption in 7 days, and 425 v/mil dielectric strength for a 100-mil sample. Made by **Emerson & Cuming, Inc.**, 869 Washington St., Canton, Mass.

▲ For more details circle NED-912 F8 on enclosed inquiry slip ▲

SILVER SOLDER BRAZING joins powder metal parts



Larger powder metal parts can now be made by joining small Oilite units through a silver solder bonding process. Any number of bearings or parts can be permanently brazed together. Photo shows double flange bearing made by permanently joining two Oilite flange bearings to a sleeve bearing. Entire unit measures 9 x 5¾ x 4½ in. The ¾-in. thick flanges are 9 in. wide. Used on blooming mill runout tables, these bearings are subject to severe shocks and ambients up to 500° F. They are impregnated with high temperature lubricant. Process developed by **Chrysler Corp.**, Amplex Div., Box 2718-B, Detroit 31, Mich.

▲ For more details circle NED-913 F8 on enclosed inquiry slip ▲

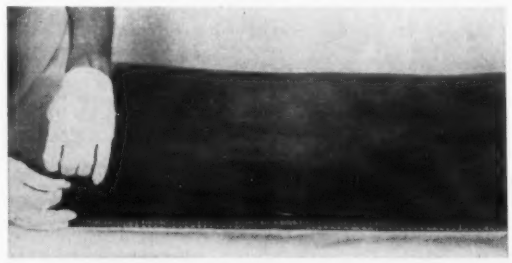
PRECOLORED FLAT STEEL is ready for marking or layout

Ready Mark precision ground tool steel is an oil hardening flat stock, precolored dark blue for marking or layout. Finish is rust-resistant and does not affect heat treatment. Steel has excellent machinability and hardness range of 170 to 207 Brinell. It conforms to AISI specification 01. Sizes range from 1/16 in. thick to 14 in. wide, all 18 in. long. Made by **Brown & Sharpe Mfg. Co.**, Dept. 43, Providence 1, R. I.

▲ For more details circle NED-914 F8 on enclosed inquiry slip ▲

HONEYCOMB BRAZING SHEET joins face and core materials

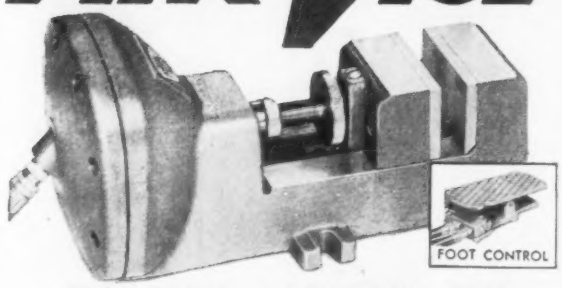
Stainless steels, high alloys, and titanium face materials and core structures can be joined with this thin, flexible brazing sheet, offered in two thicknesses. The



0.005-in. sheet is available in L.M. Nicrobraz, and Nicrobraz 10, 45, 50, 60, 130, and 150 brazing alloys. The 0.010-in. sheet is offered in these alloys, plus standard Nicrobraz, L.C. Nicrobraz, and Nicrobraz 30. Widths from 2 in. to 1 ft are available in lengths up to 6 ft and widths from 1 to 2 ft are available in lengths to 2 ft. Flexibility makes the sheet suited for curved honeycomb sections. Made by **Wall Colmonoy Corp.**, Stainless Processing Div., 19399 John R St., Detroit 3, Mich.

▲ For more details circle NED-915 F8 on enclosed inquiry slip ▲

Speedy AIR VISE



HIGH SPEED • POWERFUL GRIP

New, improved model speeds up all repeat operations—*milling, drilling, tapping, punching, bending, riveting.* Both hands left free to produce more! Light squeeze to 2250 pounds pressure! Extra thick jaws for attaching jigs. Jaws open to 3-inches; 1/16" to 5/8" maximum travel. Complete with foot control, air hose and fittings..... $44.00

SPEEDY 1-TON AIR PRESS

Does the work of expensive presses! Power factor 15 times air line pressure. 5-inch throat; Ram 0 to 5" stroke ⅝"; table 5" x 5". Operated by foot or fingertip controls. $85.00

Order from Your Supplier or Write for Air Tool Catalog

W. R. BROWN CORP., 2647 N. Normandy Ave., Chicago 35

AIR TOOLS • AIR VISES • AIR REGULATORS • FILTERS • COMPRESSORS

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NEW AIR FILTER
Drains itself bone dry!

NO HAND DRAINING

Extracts and vaporizes all air line moisture and grit, prevents costly rust and abrasion of valuable tools. Combines with pressure regulator and automatic lubricator for complete protection of air-operated equipment.

Write for full information today!

(See Thomas Register for nearest distributor's address, phone number.)

MEAD SPECIALTIES COMPANY
4114 N. Knox Ave., Dept. NA68 Chicago 41, Ill.

PATHFINDER IN AIR POWER AUTOMATION

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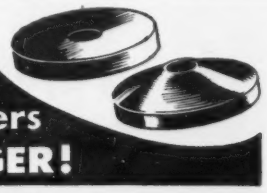
CREST Heat-Pruf™ Faucet Washers LAST LONGER!



- Independent laboratory tests prove it!
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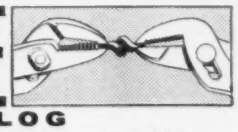
- Eliminate nuisance and high cost of washer replacement!
- One of thousands of dependable Crest plumbing maintenance products — attested by Master Plumbers!

Try it yourself! Rugged "Pliers Test" proves tough Crest washers can really take it. Severe torture tests will not harm Crest washers.

FREE CATALOG



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LOW COST INCINERATOR

BURNS
TRASH
SAFELY
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Only $110.00 COMPLETE

NO INSTALLATION COST

Burn wrappings, sweepings, papers, cartons, packing, rags, food waste, safely outdoors. Scientific draft control ends fire hazards of flying ash, sparks, burning blowing papers. Burns damp, green, or dry refuse to fine ash in any weather. Minimizes smoke and smell, needs no watching. Safe for use 10' from buildings. Stands 52" high x 35" square at base. 10 bushel burning capacity. Complete with hinged hood, ash pan base and grate and cleanout door. Made of aluminized steel (molten aluminum bonded to steel) with replaceable inner steel panel construction for long life. Shipped assembled—weight 170 lbs. Only $110.00 F.O.B. Cleveland. Satisfaction guaranteed. Other sizes available.

Write for **FREE** *Folder*

ALSTO COMPANY
Dept. NE-6 4007 Detroit Ave. Cleveland 13, Ohio

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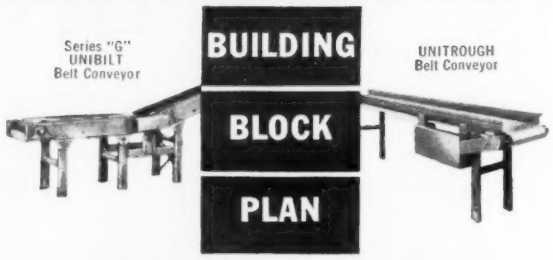
CONVEYOR SPECIALTY



Makes it practical to Mechanize Step-by-Step

Rather mechanize your handling operations a step at a time instead of all at once?

You can — practically, economically — with the Conveyor Specialty Building Block Plan.

Standardized UNIBILT® conveyor units fit together like building blocks . . . can be added easily when you want to extend the system . . . are interchangeable so you can alter the system to meet changing handling requirements.

Write for descriptive literature to

CONVEYOR SPECIALTY COMPANY, INC.
34 Newport Avenue, North Quincy 71, Massachusetts
Distributors in principal cities

KEEP **CONVEYOR SPECIALTY** IN MIND

A complete line of package handling conveyors and conveyor systems.

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Free FILTER Guide

New Filtration Bulletin describes 6 major automatic filtering processes for industrial application

2 to 1000 G.P.M. capacities are listed for coolants, cutting oils, paint spray booth water, wire drawing oils, quenching oils, edible oils and juices, optical blank grinding coolants, solvents and cleaners, aluminum foil rolling oils, air conditioning wash water, atomic and nuclear applications.

Delpark *Write today for your copy of Filtration for Industry* —First in Filtration Advancement

INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVE. LEBANON, INDIANA

▲ For more details circle **NED-932 F8** on enclosed inquiry slip ▲

New Literature & Catalogs

Packaging That Sells

Campbell Box & Tag Co.—Folder which points out advantages of package or carton eye-appeal lists dimensions of cartons in stock. Prices listed apply on purchases of 100 or more of a particular size.

▲ For more details circle **NED-933 F8** on enclosed inquiry slip ▲

Precision Instrument Components

PIC Design Corp.—Pocket-size 128-page Catalog 14 lists over 4000 precision instrument and breadboard components available from stock. Included are gears, shafts, collars, and differentials for use in research, laboratories, prototypes, and test fixtures. Many pages of technical data on instrumentation are provided.

▲ For more details circle **NED-934 F8** on enclosed inquiry slip ▲

Fork Truck Maintenance Chart

Lewis-Shepard Products, Inc.—In addition to offering tips for maximum electric fork truck operating efficiency, preventive maintenance chart pin-points 28 specific areas that should be inspected daily, weekly, or monthly. As each point is inspected, truck operator initials appropriate block in the chart.

▲ For more details circle **NED-935 F8** on enclosed inquiry slip ▲

Miniature & Subminiature Relays

Iron Fireman Mfg. Co., Electronics Div.—Relays described in new catalog include sensitive and high-speed miniature types, as well as micro-miniature units in both voltage-sensitive and current-sensitive models. Catalog provides specifications, adjustment schedules, and dimensional and circuit diagrams.

▲ For more details circle **NED-936 F8** on enclosed inquiry slip ▲

Speed Measuring Systems

General Electric Co.—Bulletin GED-3259 on speed measuring systems, puts emphasis on custom-marked scales, dual scales, and color bands for tachometer instruments as needed for incorporating into process machines. Design and application data are given on tachometer instruments and generators for industrial speed measurement.

▲ For more details circle **NED-937 F8** on enclosed inquiry slip ▲

Direct-Current Crane Control

Clark Controller Co.—20-page Bulletin 9100 on direct-current crane control equipment is also a manual on selection and application. It explains the basic direct-current hoist circuit and continues on through bridge and trolley motions, including detailed coverage of components which make up crane control systems. Attention is given to various safety and protective features.

▲ For more details circle **NED-938 F8** on enclosed inquiry slip ▲

Industrial Tires

B. F. Goodrich Tire Co.—32-page catalog lists specifications and describes use and maintenance of industrial tires. Catalog carries helpful articles on liquid weighting of tractor tires, use of wheel weights, mounting and demounting, maintenance, the use of tractor tire solution equipment, and valve and accessory equipment.

▲ For more details circle **NED-939 F8** on enclosed inquiry slip ▲

Miniature Ball Bearings

Barden Corp.—Precision miniature ball bearings added to line are described as to dimensions, tolerances, torque values, static and dynamic capacities, and limiting speeds in 6-page Catalog Supplement M1. Bearings have closer inner ring curvatures, equalizing contact stresses on inner and outer ring raceways. They remain stable at up to 900° F.

▲ For more details circle **NED-940 F8** on enclosed inquiry slip ▲

Plastic Sheets, Rods, Tubes & Films

Cadillac Plastic & Chemical Co.—64-page "Catalog and Price List" gives sizes, weights, color ranges, textures, purchasing specifications, grades, and prices of plastic sheets, rods, tubes, films, and lay-flat tubings. Table compares chemical, electrical and mechanical properties. Booklet covers acetate, acrylic, butyrate, Implex, Kel-F, Mylar, nylon, phenolic, polyethylene, polystyrene, high impact styrene, Teflon, and vinyl.

▲ For more details circle **NED-941 F8** on enclosed inquiry slip ▲

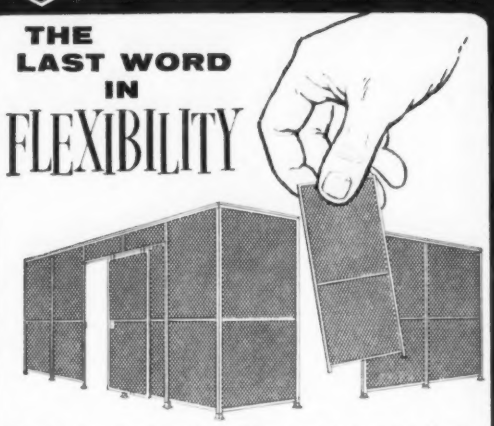
Lighting Guide Book

Sylvania Electric Products Inc.—24-page "Sylvania Incandescent Lighting Guide Book" is a convenient reference source on the incandescent light bulb—what it is, how it operates, and its numerous advantages. Major types of lamps are shown, and lighting maintenance and lamp servicing is discussed.

▲ For more details circle **NED-942 F8** on enclosed inquiry slip ▲

WIPCO WIRE PARTITIONS

THE LAST WORD IN FLEXIBILITY



WIPCO woven-steel wire partitions are designed to fit any area, regardless of height, location of doors and other openings, etc. Easy and economical to erect, your own men can put them up without outside help! Use them over and over again, salvaging each individual section for use in new erections. Available in *standard* sections from stock—or *custom-built* for any requirement, WIPCO partitions are easy to paint and clean—require little or no maintenance! For increased efficiency and flexibility at lower cost, get the facts on WIPCO wire partitions!

Write Today for Bulletin P-55!
WIRE & IRON PRODUCTS INC.
1727 SIXTEENTH STREET, DETROIT 16, MICHIGAN

▲ For more details circle **NED-943 F8** on enclosed inquiry slip ▲

Why Many Specify WILBOW *for Rubber-Bonded-to-Metal Parts*

Whenever vibration, shock, impact, stress, wear or abrasion need be relieved by rubber-bonded-to-metal parts, many engineers and buyers specify WILBOW. For they realize that WILBOW can meet exacting tolerance, material and performance requirements, yet produce these parts economically and deliver on schedule.

WILBOW facilities include modern up-to-date equipment for producing adhesion of many special materials including natural, synthetic and silicone rubbers of all types to a large variety of metals including stainless steel.

Let us know of your bonding problems and kindred requirements. Our engineers will be pleased to work with you and make recommendations.

Send for New WILBOW Catalog
It will become your handbook of rubber goods

wilbow

The WILLIAMS-BOWMAN RUBBER Co.
1954 South 54th Avenue • Cicero 50, Illinois • (Chicago Suburb)
Mfrs. of molded, punched, extruded and cut rubber goods. Specialists in producing rubber covered rolls, silicone rubber parts and bonding rubber to metal

▲ For more details circle **NED-944 F8** on enclosed inquiry slip ▲

M-N No. 525 VALVE

General Purpose Regulating Valve for Steam, Gas and Liquid Service

For pressure reducing on heating systems, gas distribution systems, heat exchangers, reboilers, fractioning columns and on fuel lines. Also for regulating pump discharge pressure.

Consult your Mason-Neilan Distributor or write for Catalog.

MASON-NEILAN
Division of Worthington Corp.
69 Nahatan St., Norwood, Mass.

▲ For more details circle **NED-945 F8** on enclosed inquiry slip ▲

ARCWELD MODELS CE, JE

Two Musts For Accurate

Creep Rupture Testing

Arcweld Model CE Creep Tester

Performance-proved Model CE offers two capacity choices: 12,000 or 20,000 pounds. Occupies only 817 square inches of floor space. Operated by push button electric weight elevator or automatic inch-down. Elevator maintained fraction of inch below weight pan. Prevents shock when specimen breaks. Other features: adjustable counterbalanced lever arm • precision knife edges • substantiated axial alignment • self-aligning, heat-resisting grips • keyed lower extension grip • optical creep measuring equipment.

Compact, economical Model JE was developed for plants with limited floor space. Available in 12,000, or 20,000-pound capacity. All control instruments mounted on single-hinged panel. Automatic creep recording equipment. Precision guided-way drawhead offers ultimate in operating possibilities when specimen must be tested without shock, bending, torsional or cyclic effects, varying load or axiality. Drawhead travel for more than 5 inches also available.

Above machines available with vernier adjustment on lever for ratio calibration. Dual ratio lever system also available at slight additional cost. Write today for more information.

ARCWELD MANUFACTURING COMPANY
P. O. Box 311, Grove City, Pa.

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with a

DI-ACRO BRAKE

The Di-Acro Brake is a six-in-one precision metal working machine simply tooled for a variety of jobs. Ten models in 6", 12", 18" and 24" widths handle up to 16 gauge mild sheet steel.

Consult the yellow pages of your phone book for the name of your nearest Di-Acro distributor or write for 16 page "Handy Guide" to Di-Acro Brakes.

di-acro PRECISION METALWORKING MACHINES

pronounced die-ack-ro

O'NEIL-IRWIN MFG. CO.
354 Eighth Avenue • Lake City, Minnesota

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New Processes & Materials

ETCHED GLASS SCREENS have 562,250 holes per sq in.

Having excellent dielectric properties, glass screens with 562,250 precisely etched holes per sq in. are particularly suited for electronic storage tubes and for targets in image orthicon tubes. Transmission can be as low as 40 per cent or as high as 70 per cent, depending upon hole width in range of 0.00085 to 0.00112 in. For sealing operations, screens have metallized perimeters. They are made of Fotoform, a strong, chemically etchable, photosensitive glass. Largest size now available is 1¾-in. diameter, with a 1½-in. screen diameter. Made by **Corning Glass Works**, Dept. 21, Box 544, Corning, N. Y.

▲ For more details circle NED-948 F8 on enclosed inquiry slip ▲

GRAPHITE & SILICONE PAINT withstands up to 1000° F shock

Thermocone all-weather industrial paint for maintenance uses in the steel, chemical, and natural gas industries will withstand thermal shock in the 1000° F range. Photo shows metal plate, painted with Thermocone and heated to 1000° F, being plunged in beaker of ice water. Shock will not crack, peel, flake, or bubble the coating. Panel inserts show unimpaired condition of Thermocone treated plate at right and deterioration of ordinary maintenance coating on plate at left. Paint is made in black and aluminum colors by **Joseph Dixon Crucible Co.**, Dept. NED, 167 Wayne St., Jersey City 3, N. J.

▲ For more details circle NED-949 F8 on enclosed inquiry slip ▲

CLEAR PROTECTIVE COATING for ferrous and nonferrous metals

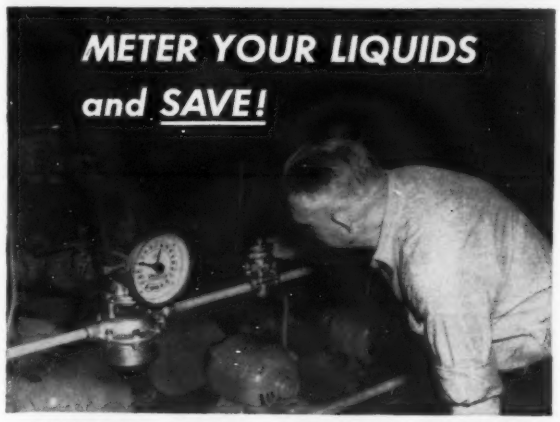
Effective corrosion inhibitors are contained in Irilac No. 1000 clear protective coating for ferrous and nonferrous metals. Product can be used to replace or enhance other chemical and electrolytic finishes. Coating is furnished as a concentrated solution of water-soluble polymer with built-in corrosion inhibitors. Solution is diluted with water and applied to surface by dip, brush, or spray method. It dries to a thin, tough coating which brings full tone to colored surfaces and clarity to iridescent surfaces. Working solutions contain no organic solvents and are nonfuming and nontoxic. Fire prevention measures are not needed with its use. Developed by **Allied Research Products, Inc.**, 4004-06 E. Monument St., Baltimore 5, Md.

▲ For more details circle NED-950 F8 on enclosed inquiry slip ▲

DURABLE TRACING FILM surface accepts pencil or typing

Engineering tracings, architectural drawings, and typeon masters are readily prepared on Duratrace tracing film. Its surface accepts pencil up to 6 H as well as typing using an acetate ribbon or carbon. It is an excellent master for whiteprint or offset reproduction, and it can be employed to combine Polaroid transparencies with typed material for lists or specification sheets. It will also produce superior projectable transparencies for visual aids. A soft rubber eraser can be employed for making corrections. Film is made of nonyellowing, waterproof, dimensionally stable Mylar with a special surface. It is available in 20-yd long 36-in. wide rolls and in standard cut size sheets. Made by **General Aniline & Film Corp.**, Ozalid Div., 15 Corliss Lane, Johnson City, N. Y.

▲ For more details circle NED-951 F8 on enclosed inquiry slip ▲



CONTROL COSTS—CONTROL QUALITY

Wherever liquids are stored, mixed or consumed, you will be ahead to measure with Rockwell industrial meters. Then you'll control your costs, control your processes, control your end product quality.

There's a Rockwell meter to measure most any liquid—oils, chemicals, paints, liquors, solvents, etc.—even corrosive fluids. Write for bulletin OG-400. Rockwell Mfg. Co., Pittsburgh 8, Pa.

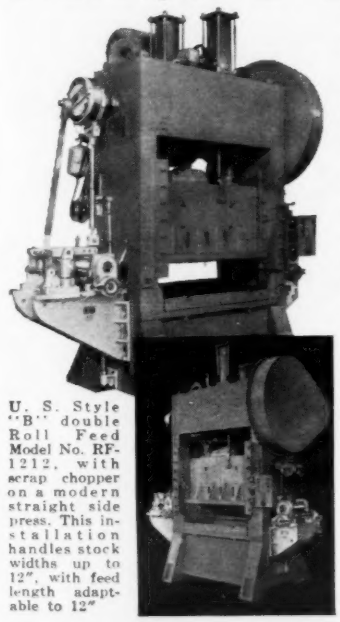
INDUSTRIAL METERS
another fine product by
ROCKWELL

Rockwell ER Meter with large reset register

▲ For more details circle NED-952 F8 on enclosed inquiry slip ▲

FOR CONSISTENT PERFORMANCE

U. S. Style "B" Roll Feeds



U. S. Style "B" double Roll Feed Model No. RF-1212, with scrap chopper on a modern straight side press. This installation handles stock widths up to 12", with feed length adaptable to 12"

U. S. Style "B" Roll Feeds are made in double and single types, with bolster plate for O.B.I. presses or with adjustable mounting brackets for straight side presses.

All Style "B" Roll Feeds are equipped with hardened hollow ground rolls, driven by hardened spiral gears running in oil. Standard equipment includes manual roll lifters; self-equalizing brakes; two-piece adjustable driving eccentric; stock oiler and eccentric operated scrap chopper. Automatic roll lifters available in ram or adjustable eccentric operated types.

Write for your copy of Bulletin 85-N for full information.

US PRODUCTS

Slides Feeds, Roll Feeds, Coil Cradles, Stock Reels, Stock Oilers, Stock Straighteners, Wire Straighteners, Die Sets, Multi-Slides®, Multi-Millers®

U. S. TOOL COMPANY, INC.
AMPERE (East Orange) NEW JERSEY

▲ For more details circle NED-953 F8 on enclosed inquiry slip ▲

KODAGRAPH MICRO-FILE EQUIPMENT

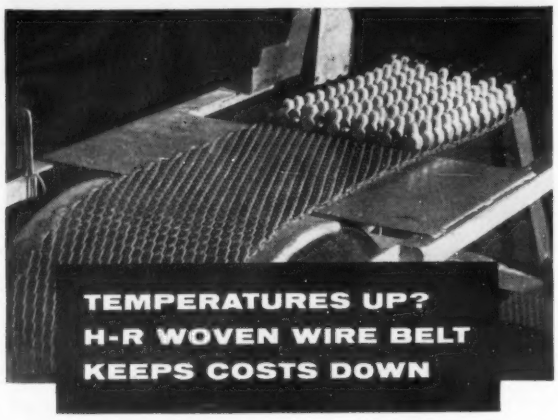
Here's everything you need for a low-cost, trouble-free microfilming operation . . . one that will meet *your* individual requirements.

- **Kodagraph Micro-File Machines**—three separate models designed to meet a variety of conditions. *Each* a high-precision unit which can be operated by anyone.
- **Kodagraph Micro-File Film**—extremely fine grained, high resolution. Assures sharp, crisp rendering of all details.
- **Kodagraph Film Readers,** which permit you to view your films quickly, conveniently.
- **Kodagraph Micro-File Enlarger,** which enables you to make paper enlargements from 16mm. and 35mm. microfilms which are comparable in clarity to the originals.
- **Kodagraph Print Film**—ideal for making positive copies of negative microfilm records.

***Write today** for new booklet—"Kodagraph microfilming for new economies in record keeping."*

EASTMAN KODAK COMPANY
Graphic Reproduction Sales Div.
Rochester 4, N. Y.

▲ For more details circle NED-954 F8 on enclosed inquiry slip ▲



Hewitt-Robins woven wire belts are available in a wide variety of alloys, in standard and special constructions, with mesh openings from 1/64" to 3". Their flexibility, strength, and draining and circulating characteristics meet the demands of conveying materials larger than 1/64".

Whether your processing involves brazing heat, subzero cold, corrosive action of gases and liquids, or other destructive forces, an H-R woven wire conveyor belt will meet your needs.

To obtain your free copy of woven wire belt catalog No. 31, consult your H-R representative, or write Hewitt-Robins, Stamford, Conn.

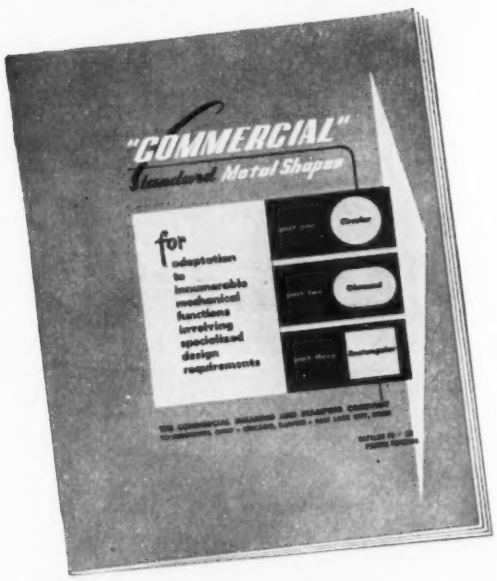
HEWITT-ROBINS

CONVEYOR BELTING AND IDLERS . . . POWER TRANSMISSION DRIVES
INDUSTRIAL HOSE . . . VIBRATING CONVEYORS, SCREENS & SHAKEOUTS

▲ For more details circle NED-955 F8 on enclosed inquiry slip ▲

HOW TO AVOID TOOL & DIE COSTS!

Hundreds of standard metal shapes offered from Commercial's "Die-Bank"



FREE CATALOG INCLUDES COMPLETE SPECS & DRAWINGS

For greater uniformity and accuracy all shapes are produced by cold forming workable metal in Commercial's dies made up from over 2,315 basic die components. Commercial also offers facilities for drilling, boring, machine trimming, burning and welding.

Custom Stampings Available

Complete engineering and design assistance, modern presses with capacities up to 2000 tons, plus our own completely integrated tool and die making service, are geared to economically produce large or small run, medium and heavy stampings to meet your exact requirements.

COMMERCIAL shearing and stamping
Youngstown 1, Ohio

▲ For more details circle NED-956 F8 on enclosed inquiry slip ▲

New Literature & Catalogs

Heating & Ventilating Units

American-Standard, American Blower Div.—48-page Bulletin 8927 is descriptive of the redesigned line of industrial heating and ventilating units. Separate sections deal with such major components as coils, fans, and assessories. Eleven sizes handle from 600 to 66,000 cfm of air.

▲ For more details circle NED-957 F8 on enclosed inquiry slip ▲

Planetary Gear Reducers

Crichton Co.—Seven basic models covering all horsepower requirements, each with 30 different ratios, are included in the line of Swedish style planetary gear reducers described in illustrated catalog. Ratios range from 3.5:1 to 216:1 in single and double planetary models.

▲ For more details circle NED-958 F8 on enclosed inquiry slip ▲

Retractile Electric Cords

Koiled Kords, Inc.—Revised Catalog 582 contains 16 pages of the latest design, performance, and application data on retractile cords for thousands of uses in equipment and industry. Specifications are tabulated for telephone, line, receiver, communication, power, and special cords.

▲ For more details circle NED-959 F8 on enclosed inquiry slip ▲

Vibration-Absorbing & Machine Leveling Mount

Clark, Cutler, McDermott Co.—Wedgmount mounts for machine and tool installations are described in 4-page bulletin. This vibration isolating mount features instant precision leveling, plus Air-Loc vibration absorbing pads top and bottom to hold machines to floor without bolts or other fastenings.

▲ For more details circle NED-960 F8 on enclosed inquiry slip ▲

Transductors

Magnetics, Inc., Control Div.—Transductors measure large amounts of direct current although they are electrically isolated from the current carrying conductor. The devices are described and illustrated in 16-page Catalog T-10. Six sizes operate on 120 v and three on 240 v. Capacities range from 200 to 10,000 amp.

▲ For more details circle NED-961 F8 on enclosed inquiry slip ▲

Air Cylinders

Sheffer Corp.—Improved heavy duty C10 Series air cylinders, detailed in illustrated 8-page Bulletin 258, are available in 1½ to 6-in. bore sizes, strokes up to 24 in., and have adjustable cushions at both ends. Bulletin gives complete specifications and construction features.

▲ For more details circle NED-962 F8 on enclosed inquiry slip ▲

Servo Motors, Generators & Synchros

Daystrom Transicoil Corp.—Tables of electrical and mechanical properties of servo and synchro components are included in illustrated 22-page catalog of servo motors, motor generators, and synchros. Motors and generators are available in various frame sizes for 60 and 400-cycle operation. Dimensional drawings and available gear ratios are given.

▲ For more details circle NED-963 F8 on enclosed inquiry slip ▲

Solid Film Lubricants

Electrofilm, Inc.—Eight different solid film lubricants and their respective applications are described in detail in illustrated Catalog LB-6-1157. They are formulated to solve lubrication problems arising under high temperature (to 1500° F), low temperature (−300° F), corrosion, high loads (225,000 psi), and high speeds (to 30,000 rpm). Application data are included.

▲ For more details circle NED-964 F8 on enclosed inquiry slip ▲

Liquid Level & Flow Controls

Magnetrol, Inc.—How Magnetrol liquid level and flow controls are used at the Argonne National Laboratory experimental boiling water reactor to perform critical safety functions is related in a 10-page illustrated booklet EBWR-1. A flow chart shows the exact function of each of 16 controls in the atomic reactor.

▲ For more details circle NED-965 F8 on enclosed inquiry slip ▲

Artist's & Draftsmen's Tools

Griffin Mfg. Co.—Extensive line of stencil, replaceable blade, etching, utility, and heavy duty knives is among products described in illustrated catalog of artist's and draftsmen's tools. Also shown are carton openers, compasses, pounce wheels, circle cutters, pin vises, parallel liners, pen holders, and markers. Prices are given.

▲ For more details circle NED-966 F8 on enclosed inquiry slip ▲

REDUCED PRICES ON PAC-A-BLOCK
PALLETIZED CREOSOTED WOOD FLOORBLOCK
REQUEST OUR QUOTATION

No reason to stock carloads today. We carry your Creosoted Wood Floor Block size in stock. For immediate shipment, 25 to 400 sq. yds. shipped within 24 hours—NO waiting—carloads 10 days.

Hayden-Shaw Mineral Products
7814 W. Jefferson—Ph: VInewood 1-1571—Detroit 17, Mich.

▲ For more details circle NED-967 F8 on enclosed inquiry slip ▲

"Capsule" Catalog

of NOPAK fluid power products . . . .

Write for Bulletin SW-3

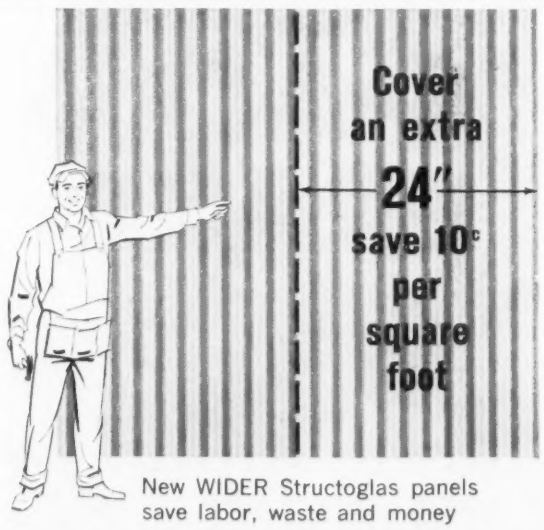
Plus Values

• For a "quick picture" of the Plus Values to be found in the complete NOPAK line . . . Air Cylinders, Hydraulic Cylinders, Air and Hydraulic Valves, Speed Control Valves and the new Nopakmatic poppet-type air control valves . . . get a copy of Bulletin SW-3. This concise, condensed, catalog belongs in your files. Ask your NOPAK representative or write for your copy of Bulletin SW-3.

A8-632

NOPAK VALVES and CYLINDERS
GALLAND-HENNING NOPAK DIVISION
2755 South 31st Street • Milwaukee 46, Wisconsin

▲ For more details circle NED-968 F8 on enclosed inquiry slip ▲



New WIDER Structoglas panels save labor, waste and money

Two new widths of Structoglas reinforced fiber glass panels give you more installed coverage area per dollar than any other panel (51½" for skylights, 50" for glazing, both covering 48"). Wider Structoglas has fewer overlaps, needs less fasteners, takes less time to install. You actually save 10c per square foot when you install 51½" Structoglas instead of ordinary 27½" panels.

Write for specs and prices today! Structoglas Division of International Molded Plastics, Inc. Dept. NE6, Cleveland 9, Ohio

structoglas®

▲ For more details circle NED-969 F8 on enclosed inquiry slip ▲

NEW Chromalox Electric Microfins® for forced convection air heating

This new, small-mass heater provides rapid heat-up almost equal to open coil elements. Unlike open coils, however, Microfins offer the advantages of a totally enclosed and insulated element only ¼-inch in diameter.

Microfins are ideal for air ducts and blower type space heaters, such as those used for industrial ovens and dryers. Their easy formability and high watt density (up to 80 watts/sq. in.) permit Microfins to pack maximum heat output into minimum space.

Standard lengths from 5½ to 47½ inches; 120 and 240 volts; 525 to 3000 watts. Specials available as required.

Get more information from your Chromalox Representative or write today. 2657

CHROMALOX Electric Heat
INDUSTRIAL • COMMERCIAL • RESIDENTIAL
EDWIN L. WIEGAND COMPANY
7509 THOMAS BOULEVARD • PITTSBURGH 8, PA.

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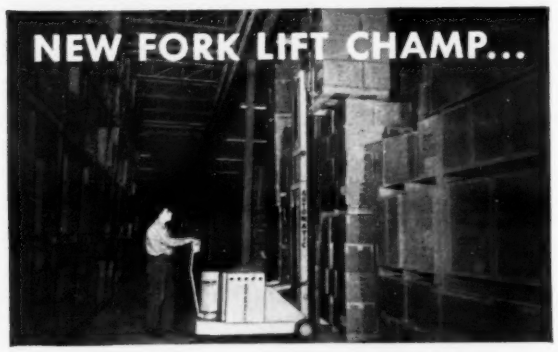
NEW FORK LIFT CHAMP...



Automatic Transporter Stacker Model WST Offers More Advantages Than Any Comparable Truck

INCLUDED ARE...
- Highest lift, 135" with 83" mast.
- Faster lift for speedier stacking.
- Twin-ram tilt prevents racking of mast.
- Short over-all length for easy maneuvering.
- Steering handle can be turned up to 200° for tight turns.
- Light weight permits work in places not safe for heavier trucks.
- Accommodates all standard attachments.
- Heavy duty Class-H Silicone insulated motors available on all models.
- Performs all functions of a rider-type machine yet costs less.
- Capacities (for loads up to 48" long) 1,000 to 4,000 lbs.

Write today for full details including convenient lease and purchase plans.

Automatic Electric Industrial Trucks Cost Less to Own...Less to Operate
AUTOMATIC TRANSPORTATION COMPANY
Division of The Yale & Towne Manufacturing Company
61 West 87th Street—Dept. H8—Chicago 20, Illinois
Automatic Electric Industrial Trucks
WORLD'S LARGEST EXCLUSIVE BUILDERS OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS

▲ For more details circle NED-971 F8 on enclosed inquiry slip ▲

TAYLOR BI-THERM* DIAL THERMOMETER

Easy Reading: A quick, reliable temperature indicator, ideal for applications where an easy-reading, low cost, direct connection thermometer is desired. Accurate to ±1% of scale, because it is unaffected by ambient temperatures. Silicone-damped to prevent pointer chatter and improve speed of response. All-welded stainless steel construction with hermetically sealed bezel. Angle stem, 3" or 5" dials; straight stem, 5" only. 4", 6", 9" and 12" stems. Separable wells, ¾" and 1". Range limits minus 40° to plus 750°F. Ask your Taylor Field Engineer, or write for **Bulletin 98267.** Taylor Instrument Companies, Rochester, N.Y., or Toronto, Ontario.

*Reg. U.S. Pat. Off.

Taylor Instruments!
MEAN ACCURACY FIRST

▲ For more details circle NED-972 F8 on enclosed inquiry slip ▲

New Processes & Materials

FOUNTAIN BRUSH
applies layout fluid, stain colors

Fast-drying marking dyes, layout fluids, and staining colors can be applied by this FB-57 fountain brush without redipping. It consists of a soft-hair brush with hollow handle attached to a squeezable translucent bulb, and joined to a screw cap on a 5-oz nonbreakable polyethylene bottle. Bulb is charged by squeezing and releasing. An occasional gentle squeeze of the bulb feeds fluid as needed. One charging can be brushed on about 350 sq in. of metal surface. Brush and empty bottle is packaged in a plastic bag selling for $1.75. Made by **Dykem Co.**, 2301-V N. 11th St., St. Louis 6, Mo.

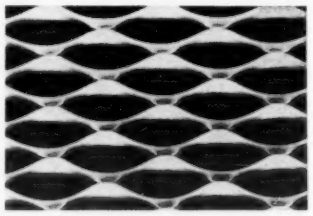
▲ For more details circle NED-973 F8 on enclosed inquiry slip ▲

HIGH TEMPERATURE WIRE
six sizes insulated with Teflon

Silver plated, stranded copper conductors are found in Bronco 500 electrical hook-up and lead wire, insulated with Teflon for an operating range of −90 to 250° F. It is impervious to most chemicals and solvents, has zero moisture absorption, will not crack at low temperatures, and permits runs of unlimited length. Sizes 20, 18, 16, 14, 12, and 10 are available in all solid and striped color combinations. Dielectric constant is 2.15 and dielectric breakdown strength is 10 kv. Made by **Western Insulated Wire Co.**, High Temperature Div., 2421 E. 30th St., Los Angeles 58, Calif.

▲ For more details circle NED-974 F8 on enclosed inquiry slip ▲

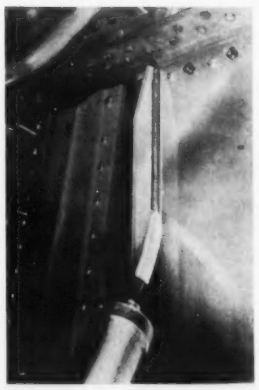
EXPANDED METALS
three new patterns offered



Decorative expanded metals cold-drawn from solid sheets of aluminum or carbon steel are being offered in three new patterns. Armorweave and Festoon are available in large 1½-in. wide mesh openings, and Cathedral, a new type of pattern, is just being introduced. Expanded metals can be curved, formed, welded, and cut, without raveling. Anodized, porcelain-enameled, and painted finishes are available. Metals serve as decorative grills, protective enclosures, baskets, ventilator panels, and filter screens. Standard patterns are three-dimensional for textured look. Cathedral and 1½-in. Festoon are also available flattened for industrial uses. Made by **United States Gypsum Co.**, Dept. 136, 300 W. Adams St., Chicago, Ill.

▲ For more details circle NED-975 F8 on enclosed inquiry slip ▲

SEALING COMPOUND
brush and thixotropic consistencies



Good resistance to jet fuels, Skydrol, lubricating oils, water, and alcohol in a range of −65 to 275° F is claimed for PR-1422 polysulfide liquid polymer-base sealing compound. Developed for sealing jet aircraft fuel tanks and pressurized cabins, it is also suited for other purposes. It utilizes a chemical curing system. Two consistencies are offered: Class A can be applied with a brush; and Class B, a thixotropic or nonsag consistency, can be applied with an extrusion or injection gun on vertical or overhead seams. Compound cures at room temperature into a firm, resilient rubber with a minimum of shrinkage. Made by **Products Research Co.**, Los Feliz & Edenhurst Avenue, Los Angeles 39, Calif.

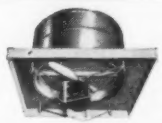
▲ For more details circle NED-976 F8 on enclosed inquiry slip ▲

Don't Let Oppressive Heat Upset Your Summer Operations

COOL BLAST FANS. Portable, stationary and heavy duty construction; 22" to 48".

UTILITY FANS. Set on floor or mount on wall or ceiling; turns full 360°; 20" to 36" diameters.

PROPELLER FANS. A wide variety of designs . . . ring, duct or panel-mounted . . . 12" to 60".



ROOF VENTILATORS. Fan powered, self opening and closing; several designs in sizes to 60"

BEAT THE HEAT — models shown available for immediate shipment

For details call your nearby Hartzell field engineer or ask for Bulletins A-109 and A-112.

HARTZELL PROPELLER FAN CO.
Div. of Castle Hills Corp.
62 Thomas Blvd., Piqua, Ohio
ENGINEERING OFFICES IN PRINCIPAL CITIES

▲ For more details circle NED-977 F8 on enclosed inquiry slip ▲

EXCLUSIVE GITS MATCHED-SET AIR LINE LUBRICATION

To meet modern industry's growing demand for better air line lubrication, this complete "matched-set" line of Air Line Lubricators, Filters and Regulators offers an exclusive combination of important advantages, including:

REDUCED INVENTORY. Only 1 size handles any air line in the plant up to ¾" pipe size.

INSTANT MONITORING by Gits Mist-a-Dome.

MINIMUM PRESSURE DROP, regardless of volume of air: a result of Gits By-Pass Valve.

FLEXIBILITY. Can lubricate from ¾ to 90 cubic feet of air per minute.

Get full details. Send for this

NEW FREE CATALOG

GITS BROS. MFG. CO.
Pneumatics Division
1833A South Kilbourn Avenue, Chicago 23, Illinois

▲ For more details circle NED-978 F8 on enclosed inquiry slip ▲

Webster DIRECT READING
HYDRAULIC TYPE
FORCE GAUGES

Measures electrode pressure on spot welders and roll welders. Makes compressive tests on forming, dimpling and upsetting operations. Also useful for weighing. Insulated contact surface prevents damage if welder is accidently fired. Easy setups, no delicate mechanisms, 5 ranges: 0-1000, 6000, 10,000, 20,000, 40,000 lbs. 3½" diameter gauge with accuracy to 1%. Reads directly in pounds—no conversion scales. Write for details.

Webster INSTRUMENT, INC.
Dept. N, 11856 Mississippi Ave., Los Angeles 25, California

▲ For more details circle NED-980 F8 on enclosed inquiry slip ▲

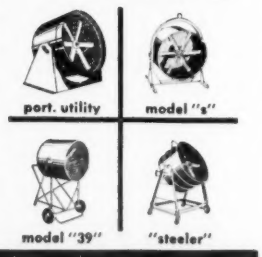
increase worker efficiency with

Aerovent MANCOOLER FANS

model "56"

For spot cooling of men and machines, exhausting dust or for general air circulation, these units aid in improving efficiency and production.

Five portable types—cradle, pedestal and 2 or 4 wheeled—each adjustable for 180° discharge. 24" to 48" (portable utility 16" to 36".) 2, 4 or 6 blades. Heavy-duty construction, with welded-steel guards for maximum safety.



port. utility | model "s" | model "39" | "steeler"

write for free bulletin 250

Aerovent FAN CO. INC.
Ash and Blake Sts. Piqua, Ohio

▲ For more details circle NED-981 F8 on enclosed inquiry slip ▲

FREE to production men
ONE-YEAR SUBSCRIPTION
BLACKHAWK® HYDRAULIC
PRODUCTION COSTCUTS

MAIL COUPON BELOW to get free Blackhawk PRODUCTION COSTCUTS sent to you every month. Each issue is an actual case history, demonstrating how others use Blackhawk hydraulics to speed production all over the shop. You'll also get a permanent file folder for COSTCUTS.

BLACKHAWK MFG. CO. Dept. H-1468, Milwaukee 46, Wis.

Please send me PRODUCTION COSTCUTS and file folder. I understand there's no obligation.

NAME .....
TITLE .....
COMPANY .....
ADDRESS .....
CITY ..... ZN ..... STATE .....

▲ For more details circle NED 982 F8 on enclosed inquiry slip ▲

New Literature & Catalogs

Flexible Tubing Data

Pennsylvania Flexible Metallic Tubing Co.—36-page technical data booklet on all types of flexible tubing and hose points out the value and steps in proper application of tubing to all types of industrial installations. It illustrates tube testing to assure peak performance, couplings, and successful tubing applications. Step-by-step instruction page guides tubing specifying and ordering.

▲ For more details circle NED-983 F8 on enclosed inquiry slip ▲

Circuit Breakers

I-T-E Circuit Breaker Co.—Fundamentals of selective short-circuit protection for motor circuits are covered in 8-page Bulletin 5040-A. It reviews features and applications of the Type ETI molded-case circuit breaker—an instantaneous magnetic trip device used in series with the proper motor-running overcurrent trip device. Frame size, trip ranges, and suggested trip setting positions are tabulated.

▲ For more details circle NED-984 F8 on enclosed inquiry slip ▲

Highway Truck Tires

B. F. Goodrich Tire Co.—Nine factors within the control of truck owners and operators determine the kind of service tires will give, according to "Highway Truck Tire Data Book". The 42-page book discusses these factors, lists and describes line of truck tires, suggests servicing safety rules, and carries tables on load and inflation.

▲ For more details circle NED-985 F8 on enclosed inquiry slip ▲

Molded Mechanical Rubber

Phoenix Mfg. Co., Rubber Product Div.—Folder describes company's four-step service to assist customers in developing a better product. Company custom compounds and fabricates natural and synthetic rubber products to meet specific conditions. It discusses analysis, design, compounding, and manufacture.

▲ For more details circle NED-986 F8 on enclosed inquiry slip ▲

Bronze Bushings & Bearings

Buckeye Brass & Mfg. Co.—Covering standard stock cast bronze bushings bearings, and machined bars, 28-page price Catalog 580 lists 248 additional sizes of bushings and bearings. Among special bronze bearings are four designs of graphited bearings offered in any size.

▲ For more details circle NED-987 F8 on enclosed inquiry slip ▲

Industrial Rolls

Rodney Hunt Machine Co.—Complete industrial roll buying guide No. 180 details engineering, construction, and application of all types of wood, rubber, metal, and plastic rolls. Special alloy rolls for difficult or corrosive applications are covered as well. Selection and maintenance guidance is provided.

▲ For more details circle NED-988 F8 on enclosed inquiry slip ▲

Screw & Bolt Products

Abbott Screw & Mfg. Co.—Consumer net price Catalog SS106 of 24 pages covers socket set screws, stripper bolts, dowel pins, socket head cap screws, and pipe plugs. Prices are given for bulk and package quantities, with special contract prices for large volume users.

▲ For more details circle NED-989 F8 on enclosed inquiry slip ▲

Couplings

Browning Mfg. Co.—Tabulated sizes, specifications, list prices, and normal service ratings are provided in 12-page Catalog C-210-A on fixed bore and bushed type flexible couplings, sleeve and rigid couplings, jaw type and chain couplings, and split taper bushings.

▲ For more details circle NED-990 F8 on enclosed inquiry slip ▲

Overhead Travelling Cranes

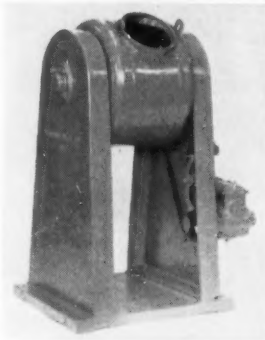
Robbins & Meyers, Inc., Hoist & Crane Div.—Double girder and single girder overhead cranes in both top-running and underhung designs are included in the crane line described in 20-page Bulletin 900. Motor-driven and hand-geared models in 1000 to 20,000-lb capacities are cataloged. Spans, clearance dimensions, specifications, capacities, and weights are shown.

▲ For more details circle NED-991 F8 on enclosed inquiry slip ▲

Bench Metal Punches

Whitney Metal Tool Co.—No. 16 and 17 bench hand metal punches are descriptively covered with dimensions, prices, and accessory equipment in two small folders. Respective hole punch capacities of these units are ⅜ and ¼ in. through ¼-in. mild steel.

▲ For more details circle NED-992 F8 on enclosed inquiry slip ▲



NEW STEEL BALL MILL FOR PAINT, INK AND ALLIED INDUSTRIES

Economy Mfg. Co. announces an entirely new line of small production steel ball mills

The new Economy WEARWELL CMS Steel Ball Mill is currently built in three popular capacities of 10, 15, and 20 gallon optimum working volume. All three sizes have the same 20" diameter cylinder. The 10 gallon mill has a 20" x 14" cylinder, the 15 gallon is 20" x 21", and the 20 gallon 20" x 28".

The entire cylinder is constructed of CMS (chrome-manganese-silicon) alloy steel plate. The heads have ample radii which reduces grooving to a minimum. The cylinder has four lifter bars. The cylinder operates in anti-friction ball bearings. The stands are of heavy steel plate and are mounted on a common base. The base has a recessed bottom to provide strength and rigidity.

The drive consists of an R.A. gearmotor and roller chain which is contained within the mill stand and is provided with a gear guard.

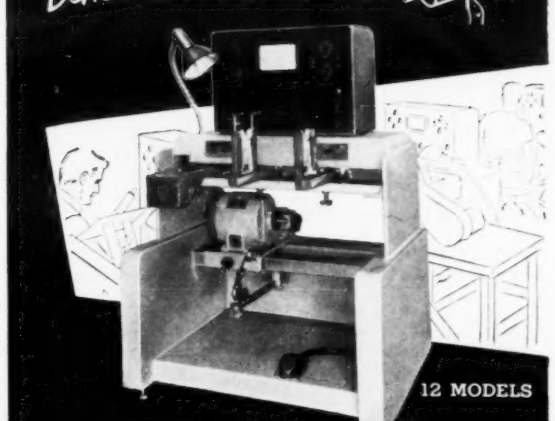
Streamlined throughout the Economy WEARWELL CMS Steel Ball Mill assures a minimum of maintenance. Because the entire unit is integral it can be quickly and easily moved and can actually be operated without floor anchorage.

The most attractively priced quality built mill available on the market today.

ECONOMY MANUFACTURING CO.
East Liverpool, Ohio

▲ For more details circle NED-993 F8 on enclosed inquiry slip ▲

Best PRODUCTION STANDARDS with Better BALANCERS BY BEKO



12 MODELS

BEKO dynamic and static balancers are proving their superiority in use every day and you can better your existing production standards at a surprisingly low initial cost. These BEKO balancers are geared for high production on close tolerance work. Their simplicity of operation with optimum worker convenience allows thoroughly efficient operation by unskilled workers. Accurate calibration directly in terms of unbalanced correction either to remove or add weight.

Write for FREE catalog

BALANCE ENGINEERING CO. • CHICAGO
Sales Division: MACDELL CORP. 842 W. LAKE ST. • DEPT. NED. CHICAGO 7, ILL.

▲ For more details circle NED-994 F8 on enclosed inquiry slip ▲

How to use
ROTAC TORQUE ACTUATORS

FREE—NEW 20-PAGE BOOK

EVERYTHING YOU'LL WANT TO KNOW ABOUT ROTAC—How It Works • Control • Applications and Special Uses • Installation Details • Complete Dimensions and Torque Ratings • Helpful Ideas on How You Can Use ROTAC in *Your* Operation.

EX-CELL-O CORPORATION
XLO 58-28
EX-CELL-O FOR PRECISION
GREENVILLE PLANT, GREENVILLE, OHIO

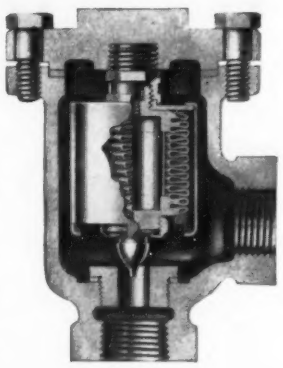
▲ For more details circle NED-995 F8 on enclosed inquiry slip ▲

GREATEST CAPACITY PER DOLLAR COST...

Sarco Thermostatic Steam Trap

And 6 other advantages!

1. **Greatest capacity per dollar cost** — 1" size discharges 9,650 lbs/hr at 10°F below steam temperature, 125 psi.
2. **Same head and seat for 0-300 psi** — no change of heads or seats for varying loads and pressures.*
3. **Fewer parts to stock** — same bellows, head and seat for 0-300 psi.*
4. **Very compact and light** — ¾" size fits in palm of hand. Weighs only 3¾ lbs.
5. **Freeze-proof**—wide open, self-draining when cold.
6. **Only one working part** — the thermostatic element. Inspected or replaced in few minutes without moving trap from line.
7. **Every trap steam-tested** — at rated max. pressure.



Sizes — ½ to 2"
Write for Bulletin 250

**No 9-300—Cast steel body and cap, with Monel metal bellows*

SARCO COMPANY, INC.
635 Madison Avenue,
New York 22, N.Y.

SARCO

2247-F

For more details circle NED-996 F8 on enclosed inquiry slip

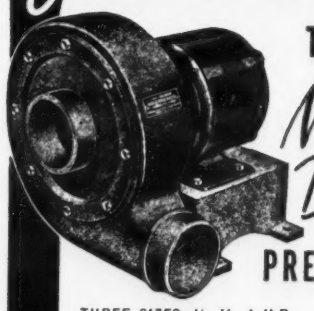
FULL CONE—HOLLOW CONE—FLAT SPRAY

Spraco has the most complete line of nozzles available anywhere — **IN STOCK.** Capacities range from ⅛ pint/min. to 4000 gal./min. Bronze, cast iron, and stainless steel. Write for our nozzle catalog.

SPRAY ENGINEERING CO., *106 Cambridge St., Burlington, Mass.*

For more details circle NED-997 F8 on enclosed inquiry slip

THE Sutton MOTOR DRIVEN PRESSURE BLOWER



THE WORLD'S *Most Dependable* PRESSURE BLOWER

THREE SIZES ¼, ½, 1 H.P.

USED FOR EXHAUSTING DUST, SMOKE, FUMES, VAPOR . COOLING AND DRYING . . CONVEYING COTTON, WOOL, SHAVINGS . . FORGE BLASTING

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY to reduce weight and increase strength. CENTRIFUGAL TYPE. Delivers even, non-pulsating flow of air. Universal as to rotation and discharge. Direction of discharge may be changed to any of eight 45 degree positions. Straight wall construction reduces windage and increases efficiency. Standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor, open or totally enclosed types. Capacities, 100 to 800 cu. ft. per min. at static pressures from ½" to 6".

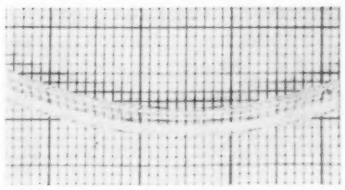
WRITE FOR LITERATURE AND PRICES

Sutton *Manufacturing Corp.*
112 W. WILSON AVENUE NORFOLK, VIRGINIA

For more details circle NED-998 F8 on enclosed inquiry slip

New Processes & Materials

VINYL TUBING
offered in crystal clear grade



Crystal clear and resistant to discoloration under normal use conditions, ST 310 Cyclon polyvinyl chloride tubing is suited for laboratory use, as well as for conveying foods and liquids in process. Its clarity makes minute impurities and small air bubbles easily seen. Standard sizes from 0.120 to 1½-in. ID are available in wall thicknesses of 0.025, 1/16, 3/32, ⅛, 5/32, and 3/16 in. It fits all normal fittings, accommodates operating temperatures to 175° F, and can be sterilized repeatedly at 250° F for 15-min intervals. Light slurries and weak acids and alkalies can be handled. Made by **Fanner Mfg. Co.,** Munray Products Div., 12390 Crossburn Ave., Cleveland 11, Ohio.

For more details circle NED-999 F8 on enclosed inquiry slip

PLASTIC RAILING
for indoor and outdoor uses

Strength, durability, economy of upkeep, and attractive appearance are features of a tubular railing made of plastic with L. O. F. glass fiber reinforcement. Adaptable to various interior and exterior uses, it is corrosion resistant and made in a variety of colors. Hollow circular sections with from 2 to 12-in. diameter and up to 20 ft long are joined by a short length of tubing that is inserted within the abutting sections. The plastic insert is not bonded to the tubes, thereby forming an expansion joint. Tubing will not soften or sag when hot or become brittle when cold. One 20-ft section weighs less than 25 lb. Made by **Amercoat Corp.,** Dept. ND, 4809 Firestone Blvd., South Gate, Calif.

For more details circle NED-1000 F8 on enclosed inquiry slip

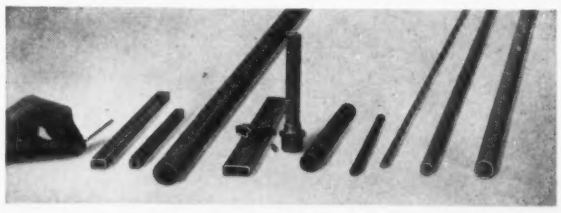
FLOOR SEALER
resists abrasion, moisture, burns

Light, semilustrous film that does not darken with age is provided by the No. 15 heavy duty floor sealer. It has high resistance to rubber and friction burns, abrasion, moisture, and dirt penetration. The fast-drying, epon-base material is alkali resistant, making it effective for use on concrete floors, as well as wood floors. Made by **G. H. Tennant Co.,** 721 N. Lilac Dr., Minneapolis 22, Minn.

For more details circle NED-1001 F8 on enclosed inquiry slip

GLASS-REINFORCED PLASTICS
seamless epoxy and silicone forms withstand −320 to 400° F

Produced in tubular and other forms, Chemtube seamless, glass-reinforced epoxy and silicone structures have high mechanical and dielectric strength in tempera-



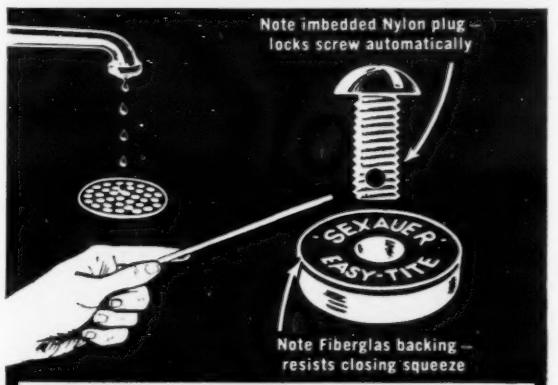
ture range from −320 to 400° F. Materials are being used in aircraft electronic fuel gages and as rigid conduits for corrosives. Under development are applications in waveguides, transformer cores, condenser sheaths, coil forms, electronic potting, and hydraulic and pneumatic systems.

Dielectric strength is up to 500 v per mil, compressive strength is 22,000 psi, tensile strength (tube) is 22,200 psi, and flexural strength (fiber stress) is over 32,000 psi. Round structures are made in 7 to 8-ft lengths; square units, 2 ft. Epoxy tubing ranges from ⅛ to 2 in. ID, with wall thicknesses starting at 0.015 in. Silicone Chemtube is produced in square and rectangular cross-sections, in 18 to 24 in. lengths. Both silicone and epoxy structures can be modified with color pigments or inorganic fillers. Made by **Chemfab Corp.,** 40-31 23rd St., Long Island City 1, N. Y.

For more details circle NED-1002 F8 on enclosed inquiry slip

P-M PATTON-MacGUYER COMPANY
16 Virginia Ave., Providence 5, R. I.

For more details circle NED-1003 F8 on enclosed inquiry slip



NEW WAY TO
Prevent Faucet Leaks!

★ **9 out of 10 washers are fastened with screws that are TOO LONG or SHORT. The screws quickly loosen; the loosened washers are destroyed thru grind and squeeze of opening and closing faucets.**

34 years of research uncovers new solution

★ **Now, NEW (Patented) 'Sexauer' SELF-LOCK Monel screws, with an imbedded expanding NYLON PLUG, lock at the required depth AUTOMATICALLY, hold washers FIRMLY! Made of rustproof, non-corroding Monel, heads don't twist off, screw slots don't distort. They are easily removed when necessary, can be re-used repeatedly.**

★ **Used with NEW 'Sexauer' EASY-TITE faucet washers, they make a combination that outlasts past faucet repairs "6-to-1"! EASY-TITES are made of super-tough, pliable du Pont compound (neither rubber nor fibre) and reinforced, like a tire, with a vulcanized layer of Fiberglas. They resist distortion and splitting from shut-off grind and squeeze.**

Hidden costs of faucet leaks!

Faucet leaks are costly! As authenticated by Hackensack, N. J. Water Co. and American Gas Association, stopping just ONE PIN-HOLE SIZE (1/32") LEAK can reduce water waste 8,000 gal. quarterly. If a HOT WATER FAUCET LEAK, water and fuel savings JUMP to over $7.58 QUARTERLY—plus additional savings on MATERIALS, LABOR and costly FIXTURE REPLACEMENTS!

NEW SELF-LOCK screws and EASY-TITE faucet washers are just TWO of the "SEXAUER" line of over 3000 TRIPLE-WEAR plumbing repair parts and Pat'd. precision tools.

A "SEXAUER" Technician in your vicinity will make our NEW 126 page Catalog "H" available. He will gladly consult with you regarding a SURVEY of your plumbing fixtures to determine correct repair parts required and establish reasonable stock levels that avoid both overstocking and shortages—thus providing for efficient stock arrangement and control—all without obligation. WRITE TODAY!

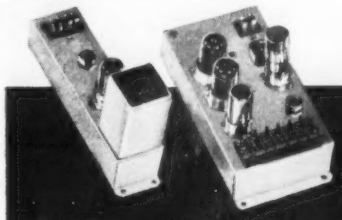
J. A. Sexauer Mfg. Co., Inc., Dept. AU-68
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your NEW, 126 page catalog "H."*

My Name_____ Title_____
Company or Institution_____
City_____ Zone_____ State_____

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-1004 F8 on enclosed inquiry slip



. . . PACKAGED CIRCUITS

BIDDLE TONE SIGNALLING EQUIPMENT

These complete tone generator and tone detector circuits, employing Frahm® Resonant Reed Oscillator Controls and Relays, are available as veritable "building blocks" for your communications system. Applications for these packaged circuits include: selective calling, remote operation, supervisory control, data transmission, telemetering, and monitoring.

The Tone Generators are complete packaged oscillator circuits capable of supplying any one signal frequency within the ranges of 20 to 250 cps or 250 and 1100 cps, with accuracy of ± 0.15%.

The Tone Detectors operate with signals having any one frequency in the range of 20 to 1000 cps.

Complete details on these packaged circuits are available. *Request Bulletins 33 and 34-D.* B-807

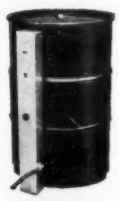
JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

For more details circle NED-1005 F8 on enclosed inquiry slip

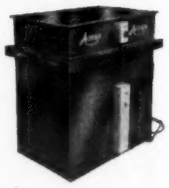
Aircon VAPOR DEGREASERS

ANY SIZE . . .
Standard or Custom

Aircon Vapor Degreasing Systems are available in a complete line, ranging in size, from the smaller bench and barrel-type units to the larger, permanent, high capacity degreasers.



Aircon Degreasers are:
- GAS, ELECTRIC OR STEAM HEATED
- COMPLETE UNITS WITH ALL SAFETY EQUIPMENT



NO EXTRAS TO BUY!
Low level thermostat and water flow interlock are included at no extra cost.

Write today for full information

WE ARE DESIGNERS AND ENGINEERS OF SPECIAL DEGREASING EQUIPMENT. CONSULT US ON YOUR DEGREASING PROBLEMS.

Armstrong & White
CHESWICK, PENNSYLVANIA

For more details circle NED-1006 F8 on enclosed inquiry slip

SHAWMUT'S TIME-TESTED SILVER-PLATED Tri-onic®
(Dual-Element)
The General Purpose Fuse

*Interrupting Capacity 25,000 Amps. A.C.

KEEPS MOTOR CIRCUITS SAFE

This is the first low voltage fuse with a published interrupting capacity of 25,000 Amps. (15,000 Amps. more than required by U.L. Standard for fuses.) For real protection use it in place of all ordinary types of fuses.

TRI-ON IC GIVES 3-WAY PROTECTION

1. HIGHER INTERRUPTING CAPACITY. 25,000 A. @ 250 V & 600 V. Handles short-circuits 2½ times larger than ordinary fuses. Expands fuse application into 25,000 Amp. zone. Use it on bus plug-in duct, bus-ways, feeders, motor control panels, branch circuits.
2. LONG TIME-DELAY. Safely starts heavily loaded motors without blowing. Prevents circuit "outage" caused by heavy motor-starting currents or load swings. Provides "matched" protection for your motors.
3. COOLER OPERATION. Runs cool because of silver-plating and low I²R losses throughout. Opens at 286° F. or 500° lower than ordinary zinc links. Ideal for distribution and panel boards, motor branch circuits, knife and enclosed switches.

Insist on TRI-ONIC.
Ask for TRI-ONIC Bulletin today.

* U.S. Patent Nos. 2,111,749 – 2,300,620 2,321,711

Tri-onic – Awake At The Switch

THE CHASE-SHAWMUT CO.
374 MERRIMAC STREET • NEWBURYPORT, MASSACHUSETTS
Subsidiary of I-T-E CIRCUIT BREAKER CO., Philadelphia, Pennsylvania

For more details circle NED-1007 F8 on enclosed inquiry slip

New Literature & Catalogs

Engineering-Design-Manufacturing Facilities

Centerline Inc.—Facilities of this company for both design and manufacturing of a product prototype, special machinery, or production tooling are described and illustrated in a 16-page brochure. Services cover product, automation, tool engineering, plant efficiency, and manufacturing. A number of typical products designed by the company are shown.

For more details circle NED-1008 F8 on enclosed inquiry slip

Tool Steels

Crucible Steel Co. of America—Three technical manuals deal with the use of tool steel in industrial production. "Tool Steels for Forging Operations" treats the use of various grades of tool steels for hot forging of steel. "Tool Steels for the Die Casting Process" specifies steels for the basic components of a die assembly. "Tool Steels for the Hot Extrusion Process" covers the various extrusion processes. All contain much tabular data in their 16, 16, and 12 pages, respectively.

For more details circle NED-1009 F8 on enclosed inquiry slip

Masonry Water Repellents

General Electric Co., Silicone Products Dept.—"How to Specify an Effective Masonry Water Repellent" is title of Booklet CDS-118 which details the use and benefits of silicone repellents. Application procedure is covered. Booklet CDS-120, "How To Reduce Maintenance Costs with Silicone Masonry Water Repellents," relates how silicones minimize damage from water penetration.

For more details circle NED-1010 F8 on enclosed inquiry slip

Heat Resistant Terminals & Connectors

Amp Inc.—Line of high temperature, heat resistant terminals and connectors is detailed in illustrated Catalog Section HT. Strato-Therm line has good electrical and mechanical performance up to 1200° F continuous and 2000° F cyclic. Specifications of available forms are given.

For more details circle NED-1011 F8 on enclosed inquiry slip

Using Hand Tools

Revised and enlarged 40-page booklet "How To Use Hand Tools" is illustrated with 58 how-to-do-it pictures showing 30 different tools in use. Tools are illustrated and available sizes are given. Available at cost of 10 cents from Crescent Tool Co., Jamestown, N. Y.

For more details circle NED-1012 F8 on enclosed inquiry slip

Air Gaging Cartridges

Sheffield Corp.—Where and how to use Plunjet air gaging cartridges in single and multiple dimension gages and inspection fixtures is detailed in illustrated 32-page Catalog PGC-58-1. Plunjets are pneumatic size-sensing pickup units for use on Sheffield Precisionaire and other types of air gages. Engineering specifications and applications are included.

For more details circle NED-1013 F8 on enclosed inquiry slip

Chemical Milling & Metal Finishing

Anadite Inc.—Advantages and engineering applications of chemical milling and the operations involved are described in word and picture in a 30-page plastic-bound brochure. Color pictures show typical products produced by the process for removing metal by controlled chemical etching. Also detailed are the Dow and HAE processes for magnesium, color anodizing, anodizing, vacuum cadmium plating, and other metal finishing processes.

For more details circle NED-1014 F8 on enclosed inquiry slip

Variable Transformers

Superior Electric Co.—100-page Powerstat variable transformer Bulletin P258G is a comprehensive, easy-to-read, file-fitting guide containing outline drawings, engineering data, connections, ratings, charts, and illustrations of standard 50/60 cycle Powerstates, plus some special-use type. Selection and ordering data are included.

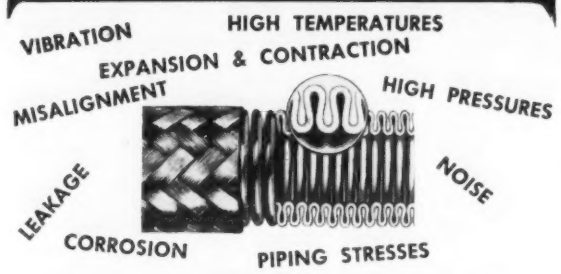
For more details circle NED-1015 F8 on enclosed inquiry slip

Motor Applications

Century Electric Co.—Matching of motor characteristics and load requirements is simplified with the 1958 Motor Application Guide. The 12-page illustrated guide provides details on line of polyphase, single phase, and direct current motors. An application chart gives information on typical driven equipment, character of loads, starting and running torques—all matched to motor designs.

For more details circle NED-1016 F8 on enclosed inquiry slip

SOLVE All these "connecting" problems...



with Flexon REX-WELD Metal Hose

REX-WELD *combines* flexibility of hose with the durability of metal to give you safe, leakproof, trouble-free service.

REX-WELD corrugated flexible metal hose is furnished in steel, stainless steel, bronze and alloys. Sizes 3/16" through 24" I.D., for burst pressures up to 12,000 psi, temperatures up to 1,000° F.

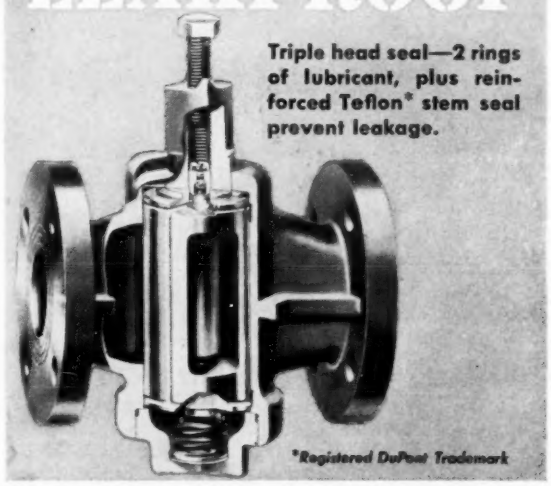
FREE METAL HOSE DESIGN GUIDE
Send for 36-page Bulletin 170 containing de ailed selection, application data and specifications for flexible metal hose.

RW-34

Flexonics Corporation
1343 S. THIRD AVENUE • MAYWOOD, ILLINOIS
In Canada:
Flexonics Corporation of Canada, Ltd., Brampton, Ontario

For more details circle NED-1017 F8 on enclosed inquiry slip

In the spots that count . . .
HOMESTEAD® VALVES ARE LEAKPROOF



Triple head seal—2 rings of lubricant, plus reinforced Teflon* stem seal prevent leakage.

*Registered DuPont Trademark

Controlled, pressurized lubrication system forces full lubricant seal around ports, and over all sealing surfaces—positively prevents sticking. Write today for full details.

HOMESTEAD VALVE MANUFACTURING COMPANY
P.O. Box 84 • Coraopolis, Pa.

For more details circle NED-1018 F8 on enclosed inquiry slip

NEW and COMPLETE CATALOG
Cutters, small tools and accessories

Here is our new, enlarged catalog with 1375 different items listed and described — more than 230 illustrations. Such essential tools as cutters, vises, arbors, rotary tables, chucks, collets, master copy type and other tool room and production line necessities are all within the covers of this 52-page book. Yours without obligation on letterhead request.

56-7a

GORTON

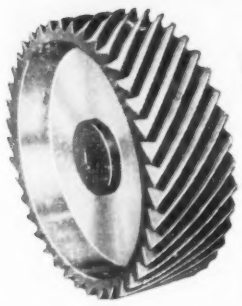
GEORGE GORTON MACHINE CO.
1906 Racine St. Racine, Wisconsin

A 8929-1/9-R2

For more details circle NED-1019 F8 on enclosed inquiry slip

Sensational NEW COSMO C-57 CONTACT WHEEL

AVAILABLE IN THE NEW WONDER MATERIAL URETHANE RUBBER



Industry Reports up to 15 TIMES LONGER WHEEL LIFE*

because of greater resistance to abrasion

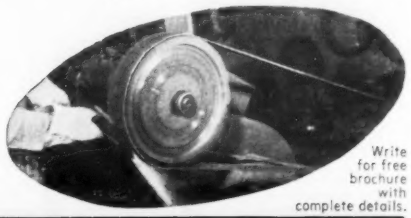
FASTER CUTTING . . . Expertly designed serrations for greater flexibility . . . covers more area with each pass.

PROMOTES AND CONTROLS SHELLING . . . prevents abrasive belt glazing.

RESISTANT TO OIL, SOLVENTS AND HEAT DETERIORATION

Increase Your Belt Life, Grind and Polish Faster at Less Cost with the new sensational COSMO C-57

Urethane Rubber Wheels Manufactured in Durometers from 60 to 90

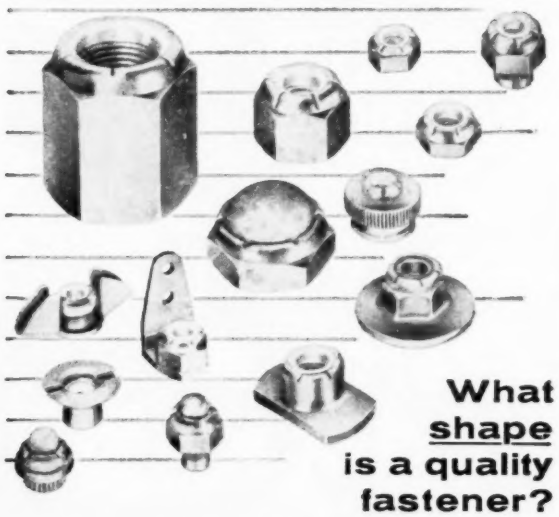


Write for free brochure with complete details.

CHICAGO RUBBER COMPANY, INC.

653 Market Street • Waukegan, Illinois

For more details circle NED-1020 F8 on enclosed inquiry slip



What shape is a quality fastener?

Here is a handful of ELASTIC STOP® nuts. Each has ESNA's familiar red locking collar*. . . is vibration-proof and made of the finest materials. Each is exactly controlled as to finished dimensions, class of thread fit and finish . . . with an unmatched record for uniformly high quality. **Most of them are standard parts . . .** some originated as a result of a specific request for ESNA's assistance. So . . . for help on *your* next fastening problem, send us the details of your application. Write Dept. S1-637.

*The red locking collar is a Registered Trade Mark of ESNA.

ELASTIC STOP NUT CORPORATION OF AMERICA

2330 Vauxhall Road, Union, New Jersey

For more details circle NED-1021 F8 on enclosed inquiry slip

Resets at a Finger-"FLICK"...

runs up to 8,000 counts per minute!

Here's a new Veeder-Root high-speed predetermining counter *with instant resetting*. Easily preset to the required number of pieces or performance-units, the counter subtracts to zero . . . *then resets with a finger-flick back to the original preset number.*

This new counter meets standard U. S. electrical requirements (JIC Codes) . . . and is available with either electrical switch or mechanical stop. Also available *without the predetermining feature*, as a high-speed reset revolution counter. *Write:*

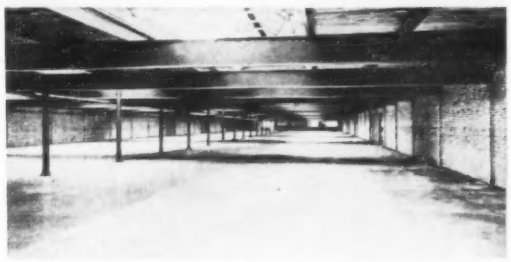
EVERYONE CAN COUNT ON Veeder-Root INCORPORATED Hartford 2, Connecticut

For more details circle NED-1022 F8 on enclosed inquiry slip

New Processes & Materials

CONCRETE BONDING AGENT
replaces water in cement mixes

Supplied as a ready-to-use emulsion or water solution, Acronite B&B is a compounded plastic dispersant which is used as a replacement for water in concrete mixes



and for bonding new concrete to old concrete. It also provides a bond with structural surfaces such as stone, brick, steel, plaster, or wood. When used as a replacement for water in mixing concrete, it is reported to quadruple its resistance to wear and sag, and to increase the load-bearing strength up to seven times. It also imparts resistance to foodstuffs, beverages, fats, and oils. It can be employed to facilitate repairing floors, as a resurfacing material for restoration, and for waterproofing above and below grade on interior or exterior surfaces. Made by **Acorn Paint & Chemical Co.**, Dept. C-658, 8001 Franklin Blvd., Cleveland 2, Ohio.

For more details circle NED-1023 F8 on enclosed inquiry slip

FLOOR FINISH
for heavily trafficked floors

Resistance to scuffing, marring, dirt pickup, and rubber marking is credited to Step - Ahead self - polishing floor finish. Product contains small and uniform particles of Polymer M which form a tight, durable, protective coating. Finish is applied in the customary manner and is maintained with normal sweeping and occasional damp mopping. It can be buffed to renew the shine. Step-Ahead is sold in 1, 5, 30, and 55-gal containers. Developed by **S. C. Johnson & Son, Inc.**, Dept. NED, 1525 Howe St., Racine, Wis.

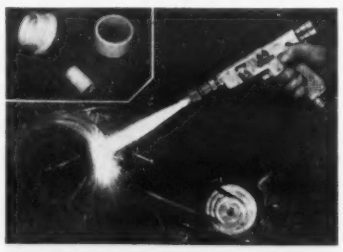
For more details circle NED-1024 F8 on enclosed inquiry slip

X-RAY ROLL FILMS
package permits daylight use

Used in radiographic quality control and inspection, Day Pack roll x-ray film is incased in a continuous, moisture resistant, opaque paper sleeve which permits daylight use of the film without enclosure in the usual holders or cassettes. Rolls are 70 mm wide and 200 ft long. Film can be cut to desired length, after which the ends of the paper sleeve are taped. Only about 1 in. of the film is light-struck or fogged. Film types available in this handy package are 506 Fine Grain, 508 Xtra Fast, and 510 Very Fine Grain. Made by **E. I. du Pont de Nemours & Co.**, Dept. NED, Wilmington 98, Del.

For more details circle NED-1025 F8 on enclosed inquiry slip

HARD SURFACING POWDER
applied to steel by spraying



High tungsten carbide content Kenspray hard surfacing powder, applied to steel parts by metal spraying techniques, has properties which closely approach the maximum wear qualities of Kennametal cemented tungsten carbides. Application can be to irregular shapes and flat surfaces. Surface coatings can be controlled from 0.010 to 0.090-in. thickness. Powder is applied by hand-held or mechanically-held metal spraying equipment. Part and coating are then heated by oxyacetylene torch or in a furnace to fuse the deposit to the base metal. Surface cannot be machined, but can be ground with diamond or silicon carbide wheels. Made by **Kennametal Inc.**, Dept. NED, Latrobe, Pa.

For more details circle NED-1026 F8 on enclosed inquiry slip

Mail Cart!

Put efficiency in your mail operation! This double-deck polished aluminum mail cart by Chesley lets your mail department categorize incoming mail for quick, error-free delivery. Lower basket for out-going mail. Both baskets are removable.

BASKET SIZE—(Upper) 17½x25x11; (Lower) 17½x25x8 FRAME—High Polished Aluminum • BASKETS REMOVABLE SHIPPING WEIGHT—33 lbs. • PRICE—$45.00 • TERMS 1% 10 days, net 30 days • F.O.B. Detroit.

File folders to fit guide bars — $.24 ea.

Write for free brochure — or, better still — order today!

Chesley Industries, Inc.

24777 Telegraph Road, Detroit 41, Mich.

For more details circle NED-1027 F8 on enclosed inquiry slip

Weight watchers use WOLVERINE ALUMINUM

WRITE FOR ALUMINUM CATALOG

WOLVERINE TUBE

DIVISION OF CALUMET & HECLA, INC.

17266 Southfield Road
Allen Park, Michigan

Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

For more details circle NED-1028 F8 on enclosed inquiry slip

FOR SPEED and SAVINGS...

Specify NAYLOR PIPE, FITTINGS and FABRICATIONS

For Exhaust Systems • Water Lines
Air Lines • Gas Lines • Compressed Air Lines
Ventilating Lines • Process Lines • Pneumatic Conveyors
Sludge Lines • Vacuum Lines • Drainage Lines

NAYLOR pipe combines light weight with the extra strength and safety you'd expect only in heavier pipe. Its spiral-lockseam structure helps to absorb shock loads and vibration. Available in carbon steel, alloys and stainless steel—in diameters from 4" to 30". All types of fittings, fabrications and connections, including the one-piece NAYLOR Wedgelock coupling that speeds installation, cuts costs.

Write for Bulletins No. 507 and 525.

NAYLOR

NAYLOR PIPE COMPANY

1247 East 92nd Street
Chicago 19, Illinois

Eastern U.S. and Foreign Sales Office:
60 East 42nd Street, New York 17, N. Y.

For more details circle NED-1029 F8 on enclosed inquiry slip

IF IT'S WORTH MAKING

IT'S WORTH MARKING

WORTH: "That quality of a thing rendering it valuable or useful." Your product is a valuable commodity, worth a great deal to you and to your customers. Your product has demonstrated its usefulness by its sales. Its quality deserves that it be *permanently identified.*

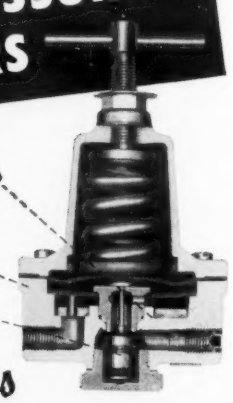
WRITE FOR CATALOGUE

IF IT'S WORTH MAKING, IT'S WORTH MARKING.

GEO. T. SCHMIDT, INC.
1800 W. Belle Plaine Avenue
Chicago 13, Illinois

For more details circle NED-1030 F8 on enclosed inquiry slip

NEW... Norgren WATER PRESSURE REGULATORS



HIGHLY RESISTANT TO CORROSION
ACCURATE REGULATION OF PRESSURE
HYDRAULIC DASHPOT DAMPENS VALVE ACTION

LOW COST... Plus LONG, TROUBLE-FREE SERVICE

WRITE FOR DESCRIPTIVE FORM 910

If it's Norgren... It's Dependable.

C. A. NORGREN CO.

3405 SOUTH ELATI STREET • ENGLEWOOD, COLORADO

For more details circle NED-1031 F8 on enclosed inquiry slip

FOR AIR-DUST OR FUME CONTROL...

Get this FREE catalog

WRITE TODAY FOR CATALOG #70
SHOWING NEW INDUSTRIAL APPLICATIONS

FLEXAUST hose and PORTOVENT retractable ducts are made of strong durable neoprene coated nylon or cotton fabrics, wire reinforced for suction or pressure uses. Sizes 1¼" to 36" i.d.

INSTALLED IN MINUTES . . .
IN SERVICE FOR YEARS

THE FLEXAUST COMPANY
DEPT. NED-6 100 PARK AVE., NEW YORK 17, N. Y.
DISTRIBUTORS IN ALL PRINCIPAL CITIES

For more details circle NED-1032 F8 on enclosed inquiry slip

New Literature & Catalogs

Retaining Rings

Industrial Retaining Ring. Co.—Engineering specifications for line of internal and external retaining rings are found in illustrated 16-page catalog. How to use stacked rings is covered, as are dispenser base and tool. Dimensional diagrams are included.

For more details circle NED-1033 F8 on enclosed inquiry slip

Relay Terms Defined

Potter & Brumfield, Inc.—Almost 200 definitions of relay terms suggested by the National Association of Relay Manufacturers are contained in a 16-page booklet. It also has 21 diagrams illustrating contact arrangements and voltage and current parameters.

For more details circle NED-1034 F8 on enclosed inquiry slip

Off-the-Road Tires

B. F. Goodrich Tire Co.—Proper attention paid to load, inflation, operating conditions, and care enables equipment operators to get maximum service from off-the-road tires, according to a 56-page illustrated booklet. Data on load and inflation, weights and measures, and tire specifications for various types of off-the-road equipment are included.

For more details circle NED-1035 F8 on enclosed inquiry slip

Spring Time!

Miller & Van Winkle—Springs from wire as fine as hair to rods 2 in. in diameter in most types of steel and alloy spring material are produced by this company. Special machinery for their production is described in the manual "Spring Digest." Compression, extension, and torsion springs are made to exact tolerances for many applications.

For more details circle NED-1036 F8 on enclosed inquiry slip

Relays, Solenoids, Switches & Coils

Comar Electric Co.—Detailed specifications for general-purpose alternating and direct current, plug-in, printed circuit, and telephone relays, coils, solenoids, and switch assemblies are content of 36-page Catalog 58. All are available in various ratings. Application data are included.

For more details circle NED-1037 F8 on enclosed inquiry slip

Valves & Boiler Fittings

United Brass Works, Inc.—Among the valve types described and illustrated in 12-page Catalog 56V are bronze globe and angle, check, Y-blow-down, gate, union swing check, and spring-loaded lift check types. Also covered are Y sediment strainers, float valves and floats, cocks, water gage fixture sets, tricocks, siphons, and relief valves.

For more details circle NED-1038 F8 on enclosed inquiry slip

Glass & Its Applications

Lancaster Glass Corp.—"Smart Designers Lean Toward Lancaster" is title of a 16-page cartoon-illustrated booklet which outlines the prime design considerations of glass. "Glass To Brighten Your Product's Future," an 8-page illustrated brochure, shows many of the custom-made glass parts produced by this company for industrial, electronic, and commercial uses.

For more details circle NED-1039 F8 on enclosed inquiry slip

Injection Molding of Thermoplastics

W. R. Grace & Co., Polymer Chemicals Div.—The operating technique and advantages of a new injection molding technique for thermoplastic materials are told in the 16-page brochure, "The Story of Pre-compressed Molding." Process enables molding of large, deep pieces on small machines. Better physical properties are obtained, and finishing costs are minimized.

For more details circle NED-1040 F8 on enclosed inquiry slip

Hydraulic Tube Fittings

Flodar Corp.—Engineering details and installation instructions for straight-thread hydraulic tube fittings are presented in 20-page illustrated Catalog 058. Line includes 45 and 90-degree elbows, tees, and plugs in a variety of combinations. Fittings fit all SAE portholes and are offered in self-flaring, no-flare, and flare types from ¼ to 2 in. OD.

For more details circle NED-1041 F8 on enclosed inquiry slip

Office Copying Machines

Copease Corp.—A factual guide to the selection of office copying machines, the booklet "The Truth about Office Copying Machines" analyzes the principal reasons for the growing use of such equipment in offices. Comparative cost, ease of operation, speed, and limitations of the various copying processes are covered.

For more details circle NED-1042 F8 on enclosed inquiry slip

SOMEWHERE IN YOUR PLANT
There's A Practical Use For A Palmer Drum Warmer

Warms Anything in Metal Drums up to 450° F

Makes removal from drums of any material that handles better when warm SAFE, EASY and CONVENIENT—by dipping, pouring or pumping.

Four models—for 55 and 30 gal. and 16 and 14 gal. (120 and 100# grease) drums.

Well-insulated hinged halves fit around drum at point of use eliminating handling of hot drums. For 115, 208, 230 or 460 volt, single or three phase.

Write Dept. 101 for literature, prices and specifications.

HAROLD L. Palmer COMPANY

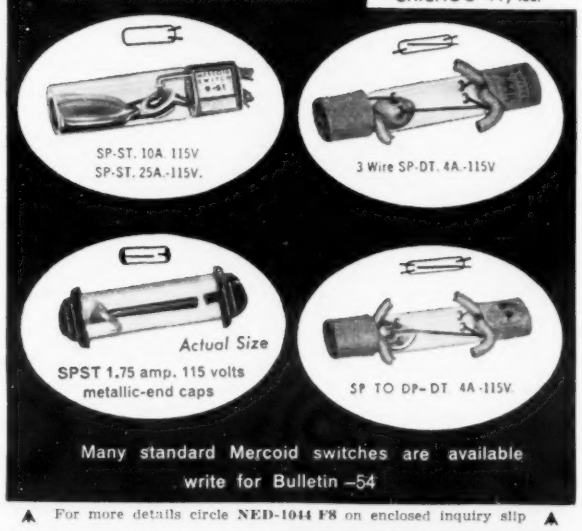
28625 Grand River Ave., Farmington, Mich. GReenleaf 4-4350

For more details circle NED-1043 F8 on enclosed inquiry slip

MERCOID® HERMETICALLY SEALED MERCURY SWITCHES

TILTING TYPE AVAILABLE CIRCUITS

THE MERCOID CORPORATION
4201 BELMONT AVE., CHICAGO 41, ILL.

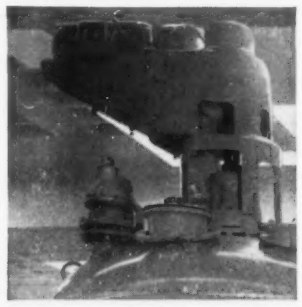


Many standard Mercoid switches are available write for Bulletin –54

For more details circle NED-1044 F8 on enclosed inquiry slip

Pfaudler

NEW AGITATION DRIVE



The new Pfaudler BH Drive holds many features which you usually expect only from custom-made drives.

Perfect alignment every time. The drive slips into a pilot fit with the pedestal mount, can only fit one way—the right way. Get perfect alignment in minutes.

Shaft and seal last longer. There are only two bearing areas on the BH Drive, giving you much wider bearing spread. Reduced run-out and shaft whip make for longer seal life. Critical agitation speed is increased 50% over previous design.

Anti-friction bearings. The BH is a quiet drive. All bearings are anti-friction, offer up to 300,000 hours of service.

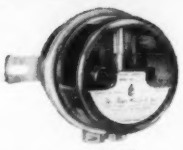
No oil leakage. Oil level is always below shaft seal. Oil cannot slop over and seep down the shaft.

Seal or stuffing box. Slip either stuffing box or mechanical seal into place *without removing drive from vessel.*

Rated for 12, 30, and 60 HP at 100 RPM.
There are many other improvements, all detailed in our bulletin No. 972 on the BH Drive. Write for a copy.

THE PFAUDLER CO., a division of PFAUDLER PERMUTIT INC.
Dept. NED-68, Rochester 3, New York

For more details circle NED-1045 F8 on enclosed inquiry slip


63300C

PHOTOELECTRIC CONTROLS for OUTDOOR LIGHTING

64401

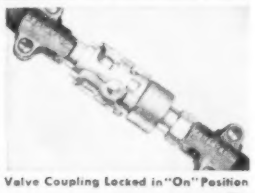
Fisher-Pierce photoelectric controls provide dependable, automatic control of lights regardless of time of day, season or weather. Lights are switched on at the same daylight value each day, off when daylight returns. Non-mechanical, they never need setting or re-setting, even after power failures. The basic F-P circuit has proven dependable, rugged and trouble-free by more than nine years' use, in controlling lights on aircraft obstructions, signs and in store windows; in parking, loading and storage areas; in street lighting and other installations. Load capacities from 300 to 6000 watts; integral and auxiliary protective devices; wide variety of mounting arrangements; SPST, SPDT, DPST contacts; turn-on settings from 1 to 500 foot-candles.

Write for descriptive bulletins, outlining your requirements.

THE FISHER-PIERCE CO., INC.
86 PEARL STREET, BOSTON 85, MASS.

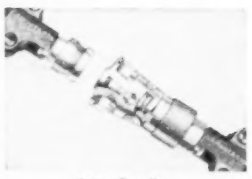
For more details circle NED-1046 F8 on enclosed inquiry slip

EXTRA HEAVY locking, safety type quickly detachable VALVE COUPLINGS

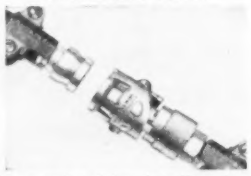

Valve Coupling Locked in "On" Position

give the operator complete control of the air line at any point

Operator can shut off air and change tools quickly. Newly improved design permits the coupling to be locked in either "On" or "Off and Exhaust" position. Air in tool is exhausted to atmosphere automatically, preventing accidents. Pressure tight leak-proof construction — but free swiveling to avoid kinking the hose. For any application involving line air to 250 psi.


Valve Coupling Unlocked and Disconnected

Valve Coupling Locked in "Off and Exhaust" Position



Write for Bulletin No. 551

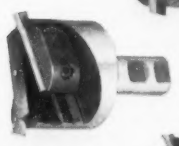
Quick-As-Wink®
Air and Hydraulic Control Valves and Pressure Specialties
C. B. HUNT & SON, INC.
2105 E. PERSHING ST. • SALEM, OHIO

For more details circle NED-1047 F8 on enclosed inquiry slip

NEW Manchester MILLING CUTTERS

OFFERS . . .
★ CARBIDE INSERTS
★ SHEAR CUT ACTION
★ MORE USEABLE CARBIDE
★ IT'S ECONOMICAL TO BUY AND MAINTAIN
★ QUICK SETTING GAGE INCLUDED

M-50
5" dia. cutter (with 1-½" dia. pilot hole) 3, ⅛" wide carbide inserts


M-35
3-½" dia. cutter, 1-¼" dia. shank, 2 carbide inserts ¼" or ⅜" wide

M-25
2-½" dia. cutter, ¾" or 1" dia. shank, 2 carbide inserts ¼" or ⅜" wide

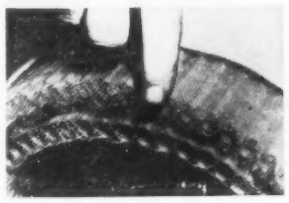
The new Manchester P.D.Q. Milling Cutters are made of heat treated alloy steel and are designed to handle the "tough jobs". Inserts may be changed in the machine. Exclusive double "V" clamp automatically registers the cutting tools. Designed for low H.P. machines. Special shanks available on request. Write for literature.

PORTAGE Double-Quick, Inc.
1043 SWEITZER AVENUE • AKRON 11, OHIO

For more details circle NED-1048 F8 on enclosed inquiry slip

New Processes & Materials

FILTER PROCESS FABRIC used for drainage, media support

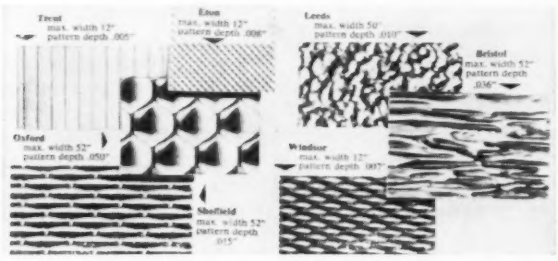


Filter media support and drainage member for wet process filters are the primary applications for U. S. Rubber Co. Trilok filter process fabrics. Its smooth surface increases filter media life and eliminates the need for undercovers, even with the lightest media. The honeycomb structure provides good hydraulic flow of filtered liquid. For wet filtration, the material can be used on American disc filter leaves, Oliver drum filter panels, low to medium pressure filters, Moore type filter leaves, filter bottom tanks, and pan filters. Envelope type dust collectors and mist eliminators or entrainment separators are other applications. Trilok, woven from Saran and polyethylene fiber, has good corrosion resistance, and good resistance to and recovery from compression. Samples and engineering assistance are available from **National Filter Media Corp.**, 1418 Dixwell Ave., New Haven 14, Conn.

For more details circle NED-1049 F8 on enclosed inquiry slip

TEXTURED METALS surfaces resist mars, dents, scuffs in a wide variety of applications

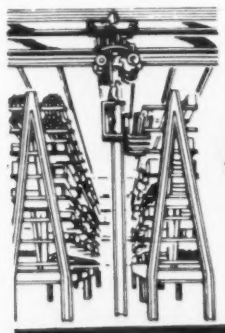
Seven textured metals shown present attractive, functional surfaces that do not show mars, dents, scuffs, and fingerprints. Some of the designs add strength



to the metal, yet decrease the basic thickness and weight. Others have functional values such as nonskid properties, heat dissipation, controlling condensation and flow of liquids, and eliminating glare by providing even light diffusion.

All of the patterns are available in standard and special perforations. When backed by sound absorbent materials, the metals have good acoustical qualities for sound deadening applications. Textured metals are available in many metals up to 52 in. wide and in any finish. Coils to 48 in. wide, multiples, blanks, or finished parts ready for assembly can be furnished. Made by **Ardmore Products, Inc.**, 211 Atlas Rd., Kenilworth, N. J.

For more details circle NED-1050 F8 on enclosed inquiry slip



use your Air rights . . .

INCREASE HANDLING EFFICIENCY, SPEED MATERIAL MOVEMENT, SAVE SPACE, TIME, MONEY WITH

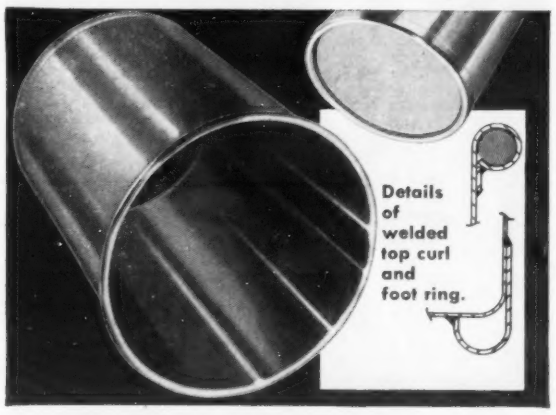
TRAK-RAK®

A TRAK-RAK System saves valuable floor area by permitting vertical material storage and handling, yet provides faster, safer in-and-out of storage handling than on the floor operation. TRAK-RAK gives you better inventory and parts control, lowers handling costs, improves material delivery. Over 200 TRAK-RAK systems installed in companies like Alcoa, Carson Pirie Scott & Co., Chain Belt Co., Du Pont, Westinghouse, General Electric, etc.

Write for complete Gib Crane Catalog showing complete line—

CHICAGO TRAMRAIL CORPORATION
1310 S. Kostner Avenue • Chicago 23, Illinois

For more details circle NED-1051 F8 on enclosed inquiry slip



Hackney Stainless Steel Crevice-Free Food Containers

- Meet local, federal maximum sanitary regulations
- Welded foot ring curl and top curl crevices
- Seamless type construction
- Made to resist years of hard service
- 30-, 55-gal. sizes—8 models; 2 types of covers available
- Plain and soldered-crevice models for less critical service

Send for complete details. Write:

Hackney
Pressed Steel Tank Company
Manufacturer of Hackney Products
1450 S. 66th Street, Milwaukee 14, Wisconsin
Branch offices in principal cities

CONTAINERS AND PRESSURE VESSELS FOR GASES, LIQUIDS AND SOLIDS

For more details circle NED-1052 F8 on enclosed inquiry slip

NEW FASTENER CATALOG

This is really an up-to-date handbook covering the Design and Purchasing of cold headed fasteners and small parts. Loaded with money saving 'Know-How'! Send for your copy of Catalog No. 106.

Hassall
MANUFACTURERS SINCE 1850

JOHN HASSALL, INC.
2178 WESTBURY, LONG ISLAND, N. Y.

For more details circle NED-1053 F8 on enclosed inquiry slip

It's what's IN these wheels That brings OUT big, new time-savings

A COMPLETELY NEW SLANT ON ABRASIVE APPLICATIONS

Multi-Use Brightboy gives you a *definitely, different working action*, with *abrasive and rubber functioning simultaneously.* BURRING, FINISHING, CLEANING, POLISHING, frequently in a single step, time saving operation. Brightboy stock numbers are "JOB-MATCHED" to your work—to your usual and special finishing. Silicon Carbide and Aluminum Oxide grains. Each in grades from extra fine to extra coarse, in soft, firm and tough rubber binders. ASK YOUR DEALER to recommend the Brightboy numbers for your needs, and for the Brightboy catalog listing applications and machine speeds. Ask him or write us for *"Notes From The Brightboy Service Engineer,"* an informal news letter describing Brightboy applications reported by our service engineers.

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

Write for FREE SAMPLE BRIGHTBOY HAND PIECE for quick-job cleaning
BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 North 13th Street
Newark 7, N. J.
America's Pioneer Manufacturer of Rubber-Bonded Abrasives

For more details circle NED-1054 F8 on enclosed inquiry slip

ADJUSTABLE PROPORTIONAL BAND Floatless LIQUID LEVEL CONTROL

This is the NEW Leslie Level-Matic Floatless Liquid Level Control Pilot with single knob indicator-type proportional band adjustment that permits setting in matter of seconds — adjustable level ranges up to 0-200".

Get complete data — Write today

LESLIE

REGULATORS and CONTROLLERS

LESLIE CO., 227 Grant Avenue, Lyndhurst, New Jersey

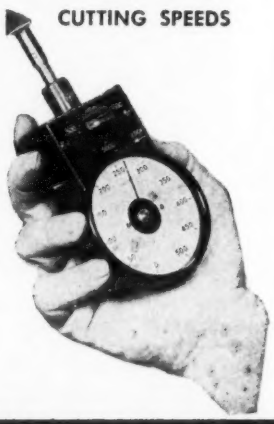
For more details circle NED-1055 F8 on enclosed inquiry slip

SMITHS TACHOMETERS

For Precise and Rapid Measurements of

- **Magnetic Design** Steady readings accurate to ±0.5% at any part of any scale.
- **Instantaneous Reading** No timing or waiting.
- **Self-Powered** Needs no battery. Always ready for immediate use at full accuracy.
- **Nine Ranges** To 50,000 rpm on highest. Interpolate tenths of rpm on lowest.
- **Overspeed Protection** Inherent and built-in.
- **Hold Button** "memorizes" reading when desired.

SHAFT SPEEDS
SURFACE SPEEDS
CUTTING SPEEDS



Complete Service Facilities — Send for Details and Literature

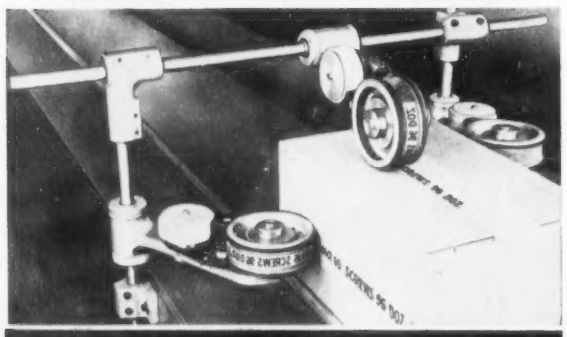
CLARENCE J. MARX CO.

Box 4033, Cleveland 23, Ohio

For more details circle NED-1056 F8 on enclosed inquiry slip

NEW SPEED-VERSATILITY ON CONVEYOR LINE

MARKING . . . CODING . . . DATING



Versa-Matic CONVEYOR LINE MARKER

Automatically imprints changeable data on wood or paper cartons, cloth or paper sacks, rolls, cans, packages and other containers. New chain driven inkers assure even ink distribution and finest impression. Trouble free operation at fast production line speeds. Interchangeable rubber type printing area 1" to 4" high—13" to 18" length. Quickest and easiest copy changes and unit adjustments. Shaft and bracket furnished with each unit.

10 day free trial

FORCE WESTERN INC.
434 S. WABASH AVE. CHICAGO 5, ILL.

For more details circle NED-1057 F8 on enclosed inquiry slip

New Literature & Catalogs

Wirebound Pallet Boxes

Wirebound Box Manufacturers Association—Versatility of wirebound pallet boxes is pointed out in an 8-page illustrated brochure which demonstrates their ability to handle bulk items of all sizes and shapes. Various types of closures and a number of applications are shown.

For more details circle NED-1058 F8 on enclosed inquiry slip

Steatite Standards

First edition of "Standards of the Steatite Manufacturers Association" contains up-to-date information on the various grades of steatite, its composition, comparative electrical properties, methods for testing, and uses. The association comprises 12 manufacturers. Standards booklet is available for $1 from Steatite Manufacturers Association, 53 Park Place, New York 7, N. Y.

For more details circle NED-1059 F8 on enclosed inquiry slip

Peripheral Marking Machines

Acromark Co.—Peripheral marking machines that hot stamp calibrations and other markings in color with a flat die and slide motion are described in illustrated 6-page Catalog 9A. Machines are air-operated, electrically-heated, and are automatic or semiautomatic. Specifications and a stamping pressure chart are included.

For more details circle NED-1060 F8 on enclosed inquiry slip

Stampings, Roll Forming & Weldments

Brown Corp. of Ionia, Inc.—Company facilities for producing stampings, roll formings, and welded assemblies are outlined in 6-page folder. Machinery and equipment specifications are given.

For more details circle NED-1061 F8 on enclosed inquiry slip

Pressure & Level Controls

Automatic Control Co.—Offered as a guide to the selection of equipment for automatically controlling liquids at predetermined levels or pressures in industrial and other applications, Bulletin BG-158 includes wiring diagrams and details of complete systems. Featured are simple, integrated, interwired electrical control systems for starting, stopping, and alternating pumps, motors, and compressors, either on-site or remotely.

For more details circle NED-1062 F8 on enclosed inquiry slip

Monomers & Polymers

Borden Chemical Co.—More than 500 monomers and polymers for research and pilot operations are listed in 1958 catalog and price list. Included are many new cross-linking agents, monomers for polyelectrolytes, and substitute ethylenmines.

For more details circle NED-1063 F8 on enclosed inquiry slip

Drafting Templates for Every Need

Way-Mac Mfg. Co.—16-page catalog entitled "Drafting Templates" contains descriptions and prices of these Rapidesign engineering aids. Available types listed include electrical, ellipses, mechanical engineering, general, architectural, processing, miscellaneous, and specialized templates. These precision, exact-scale tools are made of dimensionally stable, mathematical quality plastic.

For more details circle NED-1064 F8 on enclosed inquiry slip

Electrical Controls & Fittings

Wadsworth Electric Mfg. Co.—NEMA industrial and general duty safety switches, fusible and circuit breaker service equipment, raintight switches, panel boards, and wiring troughs and fittings are detailed in "1958 Wadsworth Guide." Over 100 pages of technical data, sizes, knockout details, and list prices are presented.

For more details circle NED-1065 F8 on enclosed inquiry slip

Limit & Snap-Acting Switches

W. L. Maxon Corp., Unimax Switch Div.—28-page Catalog 0158 gives design and application information on precision snap-acting switches in general purpose, high-sensitivity, environment-free, immersionproof, metal cased, AN and JAN, direct current, reset, appliance, miniature, and subminiature styles.

For more details circle NED-1066 F8 on enclosed inquiry slip

Pipe, Tube & Metal Shape Benders

Wallace Supplies Mfg. Co.— Prepared for those involved in problems related to pipe, tube, or structural shape bending, 16-page bulletin on Little Ram benders describes typical operations and work performed on these stationary and portable hydraulic powered machines.

For more details circle NED-1067 F8 on enclosed inquiry slip

KLIXON PROTECTORS

Standard Equipment on Flint & Walling Motors

"A KLIXON motor protector is standard specification in all single phase Flint and Walling motors. The owner of an F & W water system is assured of overload protection because his pump is powered by a Flint and Walling motor protected by a built-in KLIXON Protector."

That's how Lauren D. Eckhart, Chief Engineer of Flint and Walling, producers of domestic and farm water supply equipment, sums up his feelings about KLIXON Protectors.

And Flint and Walling is one more progressive manufacturer who counts on KLIXON Protectors to produce maximum motor performance with minimum failures during periods of overload.

You, too, can get maximum overload capacity with dependable over-temperature protection in the motors that operate your equipment . . . just specify and use KLIXON Protected Motors. Write now for complete details on KLIXON Inherent Protection for single and poly-phase motors.

METALS & CONTROLS CORPORATION
Spencer Division
3306 Forest Street
Attleboro, Mass.

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There's an Easier Way!

Break away from old fashioned cutting methods . . . save time, temper and patience. Now . . . zip through 3/16" aluminum, Fiberglas, plastics, plastic laminates, even 16-gauge steel, with minimum effort . . . maximum speed . . . with the KETT Panel Master Saw. Its performance is outstanding on metal laminates such as Mirawal, Metlwal, Met-L-Wood and Amorply. Two-inch diameter saw blades give full 3/8" depth cut. Leaves accurate, smooth milled edge that requires no sanding or finishing. Amazingly easy to use . . . extra rugged for long, hard service.

Powered by heavy duty, industrial type 110 volt AC/DC portable 5/16" capacity electric drill motor. Ball bearing equipped drive for smoother operation.

write for Catalog E-30

KS-3AM Panel Master Saw

THE KETT TOOL COMPANY
5051 Madison Rd.
Cincinnati 27, Ohio

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cost-fighting information, free

DANA CORPORATION presents

Precision and Production guide

in the diversified facilities of its

PARISH PRESSED STEEL DIVISION
Reading, Pa.

If you buy or use precision stamped or machined metal parts and assemblies, you will want to know about the cost-fighting facilities available to you at PARISH. This famous producer of automotive and ordnance goods offers you the benefits of many years of engineering and precision mass-production manufacturing experience. The Facilities Guide illustrated is available free. Requests for information on making specific parts you may need will receive a prompt reply. Write or phone today.

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Division of Dana Corporation / Reading, Penna.

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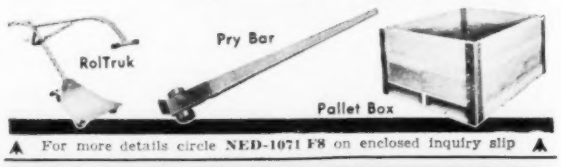
IRONBOUND SKIDS

Full range of sizes, types, capacities, underclearances!

Bolted and welded construction of C-type skids feature easy deckboard replacement.

Ironbound — **IRONBOUND**

55 Hoffman Place • Hillside, N. J.



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Gary WELDED GRATING

TAILOR MADE INSTALLATIONS

- Cost Less
- Look Better
- Give Better Service...

Eliminate expensive field alterations, piecing together and wasted material and labor by specifying Gary Welded Grating. Designed for specific loads and deflections, Gary grating is as easy to specify as it is to install. Gives maximum ventilation and illumination and long-maintenance-free service. Write for full information . . . ask for Bulletin N-68

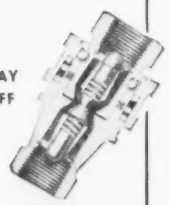
ROCKWELL-STANDARD
CORPORATION
(Formerly Rockwell Spring and Axle Company)
GRATING DIVISION
4045 E. Seventh Ave., Gary, Indiana

For more details circle NED-1072 F8 on enclosed inquiry slip

GREASE STEAM HYDRAULIC FLUIDS WATER
GASOLINE L.P. GAS REFRIGERANTS
COOLANTS
OXYGEN AIR
WHAT'S *Your* COUPLING APPLICATION?
ACETYLENE OIL
VACUUM

HANSEN
QUICK-CONNECTIVE COUPLINGS

ONE-WAY SHUT-OFF



TWO-WAY SHUT-OFF

ALSO STRAIGHT-THROUGH COUPLINGS

SPECIFICALLY ENGINEERED ...NEVER MERELY ADAPTED ...FOR EACH PARTICULAR TYPE OF APPLICATION

WRITE FOR THE HANSEN CATALOG

● Here's an always ready reference when you want information on couplings in a hurry. Lists complete range of sizes and types of Hansen Quick-Connective Couplings. Write for your copy.

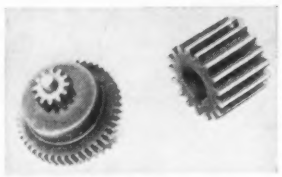
Representatives in Principal Cities

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 35, OHIO

For more details circle NED-1073 F8 on enclosed inquiry slip

New Processes & Materials

RUBBER CASTING MATERIAL has hardness, toughness, resilience



Industrial parts requiring high load - bearing and long - wearing properties can be made of Elasta-Cast, a liquid urethane rubber casting material with good abrasion resistance and tensile strength. Hardness, toughness, and resilience are combined in parts of unusual shape, contours, and sharp radii, produced with no limitations in size. Many parts can be cast at atmospheric pressure without heavy steel molds. Material can be bonded to metal and used with or bonded to rigid inserts to provide inexpensive gears, wheels, rollers, platens, and other parts. Standard formulations have a range of hardness from 62 to 95 Shore A. Tensile strengths range from 4200 to 7300 psi and ultimate elongation values are over 500 per cent. Rubber resists ozone, solvents, sunlight, aging, and oxidation. Made by **Acushnet Process Co.**, 782 Belleville Ave., New Bedford, Mass.

For more details circle NED-1074 F8 on enclosed inquiry slip

HEAT-SHAPED FABRICS have wide application in molded products and industrial parts

Dynel acrylic fiber fabrics which can be molded into special shapes by heat make possible the use of fabric for many commercial and industrial products.

Typical end uses are protective packaging for delicate instruments, covers for radios, industrial flange and valve covers, ribbed battery separators, stiffened interlinings for outerwear, and many decorative items.

Shaping process forces a cold mold into a piece of 100 per cent Dynel fabric clamped on outer periphery and heated to 320° F. Fabric is held in shape during cooling. Clamped area is then trimmed to size. Fabric retains shape until reheated to nearly shaping heat.

Vacuum molding with infrared heating of fabric is also successful, using Bakelite C-11 resin, vinyl, rubber, or cellulose acetate film to make fabric impermeable. Woven and knitted fabrics of Dynel can also be shaped by hot air process with molds of wood, glass, metal, plaster of paris, or papier-mache. Photo shows flange cover and miniature "mountie" hats. Developed by **Union Carbide Chemicals Co.**, Textile Fibers Dept., 100 E. 42nd St., New York 17, N. Y.

For more details circle NED-1075 F8 on enclosed inquiry slip

MAINTENANCE PROBLEMS END WHEN YOU USE

CHARCOTE*

NEW AND DIFFERENT PROTECTIVE NEOPRENE LIVE RUBBER-COATING

CHARCOTE is not a rubber base paint. You do not "paint" surfaces . . . you actually rubber-coat them with protection! CHARCOTE air-dries and air-cures to a tough, pliable, rustproofing and waterproofing film of neoprene rubber, and has its built-in primer. CHARCOTE can be brushed on, rolled on, sprayed or used as a dip. Available in standard industrial colors including aluminum, red, black, green and grey; and in quart, gallon, five-gallon and drum containers.

Tougher Than The Metal Itself
Protects Against:
CORROSIVE FUMES
SUNLIGHT AND HEAT
WEATHERING — ABRASION
MOISTURE — SALT SPRAY

Write For Descriptive Charcote Folder
CHARLESTON RUBBER COMPANY
18 Stark Industrial Park, Charleston, South Carolina

For more details circle NED-1076 F8 on enclosed inquiry slip

Series H-Capacities from 2000 to 50,000 Pounds

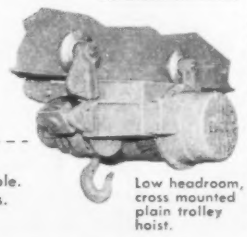
EUCLID HOISTS
for Dependable Service

These hoists are highly efficient and strictly modern in every detail with oversize anti-friction bearings and heat treated steel parts in combination with a welded frame.

The planetary gearing and mechanical load brake are mounted in oil tight housings. The hoist gearing is assembled in the hoist drum.

This design produces an unusually compact, rugged and accessible hoist readily adapted to various installations and types of control.

Write for Literature



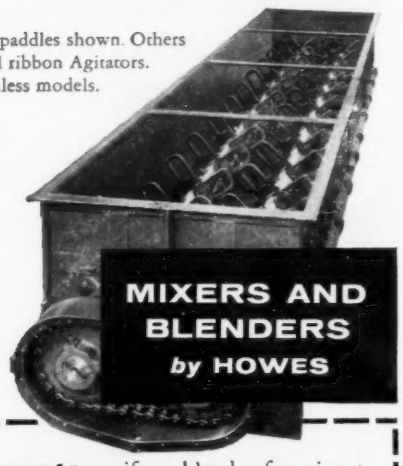
Low headroom, cross mounted plain trolley hoist.

Various other standard and special heavy duty hoists available. Write regarding your requirements.

THE EUCLID CRANE & HOIST COMPANY
1362 CHARDON ROAD • CLEVELAND 17, OHIO

For more details circle NED-1077 F8 on enclosed inquiry slip

● New loop type paddles shown. Others with reverse-spiral ribbon Agitators. Also sanitary stainless models.



MIXERS AND BLENDERS by HOWES

For accurate, uniform blends of semi-wet or dry materials—for mixing dry with liquids—the Howes line offers cost-saving, exclusive features engineered for efficient, dependable operation.

Experienced assistance available to determine proper equipment for your needs. Write for literature or specialized information.

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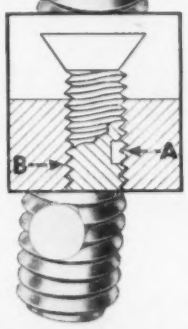
Silver Creek, N. Y.
MANUFACTURING ENGINEERS

EUREKA Mixing, Sifting and Blending • Size Reduction • Screening • Weighing and Packing • Materials Handling • Cleaning and Grading **EQUIPMENT**

For more details circle NED-1078 F8 on enclosed inquiry slip

WON'T WORK LOOSE!

Continental HOLTITE **NYLOK®** Self-locking Screws



Resilient nylon plug (A) sets up a lateral thrust, wedges mating threads together (B). Locking is positive — seated or unseated. Screw cannot work loose.

The simplest self-locking fasteners, NYLOK Screws are easy to drive . . . can be removed and replaced . . . act as seal for gases, liquids.

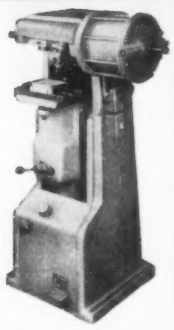
NYLOK may be the answer to your assembly problem. For complete details write Dept. ND.

CONTINENTAL
SCREW COMPANY, NEW BEDFORD, MASS.
HOLTITE FASTENERS

PHILLIPS AND SLOTTED HEAD TAPPING SCREWS. WOOD SCREWS. MACHINE SCREWS. SEMS. BOLTS. NUTS. STANDARD OR SPECIAL . . . FOR ANY ASSEMBLY

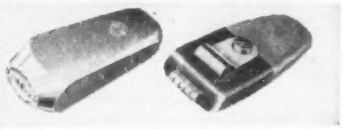
For more details circle NED-1079 F8 on enclosed inquiry slip

for MARKING
POSITIVE AS A FINGERPRINT...
on your PRODUCT



Matthews' "Duo-Life" steel dies give you real marking economy. Engraved with any reading matter you require and manufactured to suit your particular application. Send for Catalog 146-B.

For complete information on General Purpose Marking machines to stamp, roll or emboss, send for Catalog 146-C.



"Safe-Hed" steel hand stamps and Matthews' patented type holders are designed for maximum safety and performance. Completely illustrated and described in Catalog 146-A.

JAS. H. MATTHEWS & CO.
3943 FORBES STREET, PITTSBURGH 13, PA.
OFFICES IN PRINCIPAL CITIES • WRITE, CALL OR TWX PG 424

For more details circle NED-1080 F8 on enclosed inquiry slip

faster, lightweight, versatile
GREENLEE HYDRAULIC CONDUIT BENDERS

Bend ½" to 4" conduit . . . 90° in one stroke . . . with the powerful new GREENLEE No. 884 Power Bender. Many advanced features: Portable . . . one set of pipe supports for all 10 sizes . . . easy pipe removal . . . easy-to-read scale . . . identical bends easily reproduced. 90° bend in 4" conduit takes 4 minutes with GREENLEE Portable Power Pump shown . . . only 30 seconds with larger GREENLEE pumps!

Bend ½" to 4" conduit . . . 90° in one ram stroke . . . with GREENLEE No. 880 Hydraulic Bender, hand-pump or power-pump operated. Handles all sizes from ½". One man easily carries and operates. Attachments for thin-wall conduit, tubing, bus-bar.

GREENLEE

Greenlee Tool Co., 1946 Herbert Ave., Rockford, Ill.

For more details circle NED-1081 F8 on enclosed inquiry slip

JARKE MINI-MODULE STOCK STORAGE RACKS

Most efficient and flexible storage of short, medium and long lengths of bar, rod and pipe stock.

Pre-fabricated Modular Units
Quickly Set Up Or Taken Down By One Man
No Bolts No Tools • Light Weight
Special nesting caps permit fast no-slip stacking, rigid vertically-interlocked tiers. Stack them to fit your needs exactly. Heavy-duty tubular steel construction.

Send for details and FREE set of miniature plastic Mini-Modules for easy storage planning.

JARKE MANUFACTURING COMPANY
6333 Howard St.
Niles 31, Illinois

BAR AND FLANGE RACKS • WIRE COIL RACKS • CRANE GRABS • STEELMOBILE

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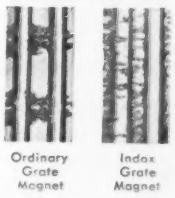

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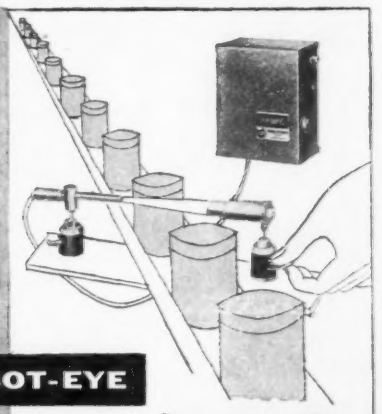

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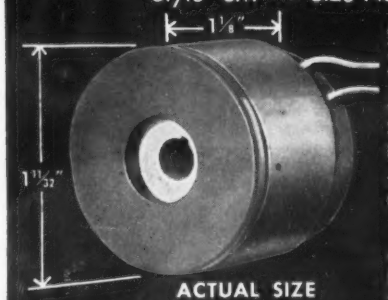

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NEW WAY TO GALVANIZE METAL

This new method of restoring damaged galvanizing which occurs during welding, saves time by coating the welded metal giving it the non-corrosive properties of the original hot dipped galvanizing. Tests prove FARCO BRAND Z will withstand 800 hours salt spray bath without rusting. The powerful flux causes the metallic content to coat any metal including Copper, Stainless Steel, Monel, Bronze, Nickel, Chromium and Evanohm.

Although strong enough to remove scale from black iron and penetrate rust and grease, it is completely stable and will not pick up moisture or deteriorate in the can.

Material does not leave a line of demarcation but amalgamates with galvanizing. It may be applied in flat, vertical or overhead position binding more tightly than hot dipped and will not flake off. The material may be applied with either torch or soldering iron depending on thickness of metal.

FARCO BRAND Z is available in 2 pound cans at $3.00 each. 10% discount on six can lots, fob Philadelphia.

Have you tried #1 Acid Brushes, 25% more hair, $3.30 per gross, f.o.b. Philadelphia. *Advt.*

FARRELLOY CO.

1246 North 26th St. Phila. 21, Pa.

For more details circle NED-1088 F8 on enclosed inquiry slip

CLOGGED SEWERS!
Remember the costly plumbing bill

CLEANS INSTANTLY!

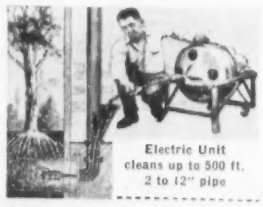
CHICAGO—June 1st. Just introduced is a Free Booklet on a New Discovery which enables the Home Owner, Janitor, or Factory Maintenance Man to clean any Clogged Sewer Drain.

Yet anyone can operate this new **Plumbers Flushing Gun** which releases air pressure on a solid shaft of water cleaning the most stubborn stoppages up to 200 feet. TOILETS, SINKS, URINALS, BATHTUBS, FLOOR DRAINS, and HOUSE-TO-STREET SEWERS clogged with Grease, Rags, Sand, Roots, and paper melt away instantly when struck by the Hammer-like blow of this new unit.

There is no need to remove wall or pipe, or Grease Trap. A special attachment allows water to flow from the faucet through the Gun while air is released on the pipe. Vents or stacks are no obstacle, as force tends to strike wherever the water lays. But now, what is this Plumbers Flushing Gun worth in **COSTLY PLUMBING BILLS SAVED?** Tear this Ad out—and write your name and address beside it for **FREE BOOKLET.** Obey that urge. No agent will call. A postcard will do (Chicago Phone Kildare 5-1792) **MILLER SEWER ROD CO., DEPT. ND-J, 4640 N. Central Ave., Chicago 30, Illinois.**

AMAZINGLY EFFECTIVE

Hose attachment feeds water thru gun while air is released causing chain reaction in pipe cleaning the most stubborn stoppage.



Electric Unit cleans up to 500 ft. 2 to 12" pipe

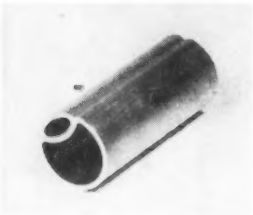
YOURS FREE! CATALOG

Complete Literature on all of Miller Sewer Rod Equipment including **Miller's Triple Action Grease and Root Cutter** which features Patented Self Expanding Blades for 3-12 pipe; Hand and Electric Units, Flat Rods, Toilet Augers. OBEY THAT URGE AND WRITE to above address. Compare our quality, prices.

For more details circle NED-1089 F8 on enclosed inquiry slip

New Processes & Materials

ALUMINUM DUPLEX PIPE heats fluids in transit



Aluminum duplex pipe is now being produced in 1½, 2, 3, and 4-in. sizes in standard 30-ft lengths. Non-standard lengths from 3 to 40 ft can be ordered. Pipe is a one-piece, two-chamber extruded tube which is designed to carry process liquid in the larger chamber and steam in the smaller chamber. Liquids that tend to solidify upon cooling can thus be kept heated in transit. Pipe is offered in alloys 3003F and 6063T5 by **Reynolds Metals Co.,** Dept. NED, 2500 S. Third St., Louisville 1, Ky.

For more details circle NED-1090 F8 on enclosed inquiry slip

DECORATIVE METALLIZED MYLAR in rolls from ¼ to 27 in. wide

Decorating of furniture, appliances, packages, jewelry, water coolers, and wearing accessories are typical applications for Mirro-Brite metallized Du Pont Mylar laminated to vinyl and a pressure-sensitive backing. It is available in precut swatches and in tape rolls from ¼ to 27 in. wide. Photo shows a gleaming fluted pattern strip applied around a large planter. Waffle pique, fluted, cross hatch, and wave embossed patterns are available in chrome and gold, all non-tarnishing. Made by **Coating Products,** 101A W. Forest Ave., Englewood, N. J.

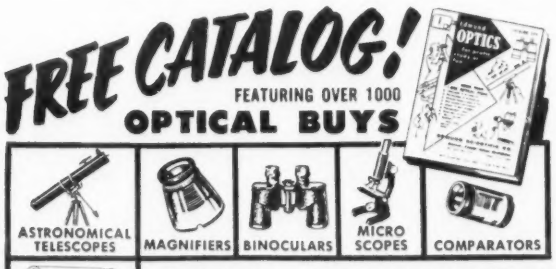
For more details circle NED-1091 F8 on enclosed inquiry slip

TAPPING FLUID prevents sticking, minimizes breaks

A few drops of Rapid Tap fluid applied to tap will prevent sticking, minimize tap breakage, and improve surface finish. As tool contacts work and pressure builds up, fluid breaks down the surface tension and adhesion, freeing the tool, and allowing continued rotation. Fluid is effective on all metals and alloys and is noninflammable and non-explosive. It is available in 4-oz cans with a switch spout that can be opened and closed with one hand. Pint cans are also available. Made by **Termite Drills, Inc.,** 97 N. Lotus Ave., Pasadena 8, Calif.

For more details circle NED-1092 F8 on enclosed inquiry slip

FREE CATALOG!
FEATURING OVER 1000 OPTICAL BUYS



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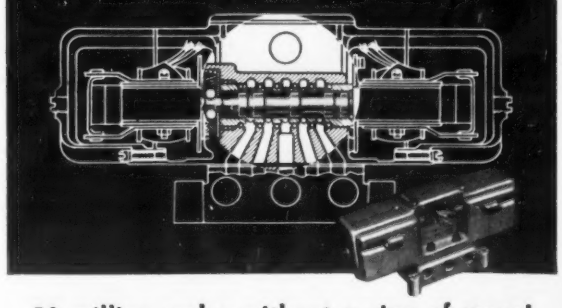
For more details circle NED-1093 F8 on enclosed inquiry slip

It's the air valve with floating sleeve-lapped spool design



50 million cycles without a sign of wear!

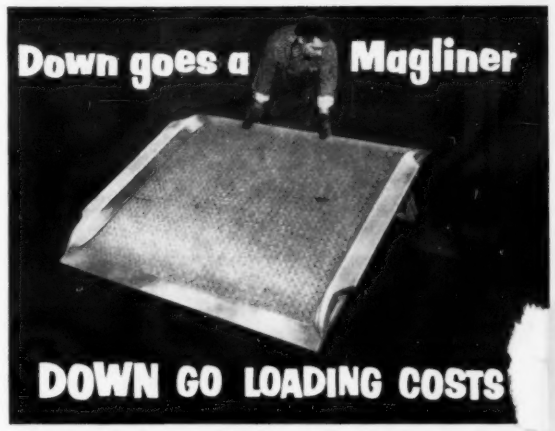
This is not just a claim, it's a fact! And Numatics has the case histories to prove it . . . cases where Numatics SA Series valves are still performing like new after well over 50 million cycles. And not on a test bench under ideal conditions, but out in the field on high speed welding guns and other installations.

With the floating sleeve-lapped spool you can expect and get this kind of performance from every Numatics valve, because the spool has no seals or packers to wear out . . . it floats on a fluid film, never contacts the sleeve wall and the sleeve floats, too, on O-rings. Both spool and sleeve are specially heat treated stainless steel, close-tolerance finished to minimize friction. In a nutshell, Numatics valves are designed and built to give you longer, more trouble-free life than any other air valves. Want a catalog? Send for it.

NUMATICS, Inc. HIGHLAND, MICHIGAN
SALES REPRESENTATIVES FROM COAST TO COAST

For more details circle NED-1094 F8 on enclosed inquiry slip

Down goes a Magliner



DOWN GO LOADING COSTS

And they'll stay down with Magliner magnesium dock boards on the job! Magliners speed loading, eliminate dock congestion . . . get extra work from power trucks and other loading equipment. Magliners are magnesium-light—easy to put down . . . easy to move. No heavy lifting . . . no injury hazards. Men, loads and equipment move *fast, sure, safe.* Magliners are magnesium-strong, too . . . built to take it . . . safely handle loads up to 20,000 lbs. Low initial cost. Less maintenance. Dependable long-life service. *Economy* and *cost-savings* right down the line! Put all these advantages to work for you. Put Magliners on your dock!

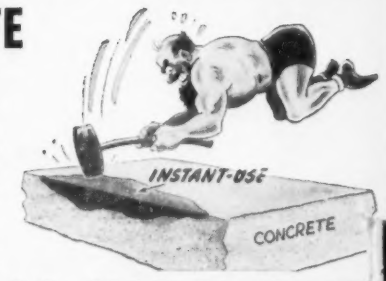
Write for Bulletin DB-204
MAGLINE INC., P. O. Box 96
PINCONNING, MICHIGAN

MagLiner MAGNESIUM DOCK BOARDS

Canadian Factory: Magline of Canada, Ltd., Renfrew, Ontario

For more details circle NED-1095 F8 on enclosed inquiry slip

INSTANT SETTING CONCRETE FLOOR PATCH



TEST IT ON TRIAL OFFER

TOUGH AS NAILS! FAST!

Repair broken factory floors without the usual traffic tie-up. Simply shovel INSTANT-USE into hole or rut — tamp smooth — truck over! No waiting! INSTANT-USE bonds tight to old concrete — right up to a feather edge. It's tough. Wears like iron. Won't crack or crumble. Install complete overlay where floors are badly chewed up. Used indoors or out. Immediate shipment.

MAIL COUPON for TRIAL OFFER and FREE BROCHURE

INSTANT-USE

FLEXROCK COMPANY (Offices in principal cities)
3603 Filbert St., Philadelphia 1, Pa.

Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and Free INSTANT-USE BROCHURE—no obligation. (Clip and attach Coupon to Co. letterhead.)
Name .....
Title .....
Company .....
Address .....

For more details circle NED-1096 F8 on enclosed inquiry slip